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

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2015

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

From the transition period from_____ to _____

Commission file number: 000-50633

CYTOKINETICS, INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**94-3291317**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
280 East Grand Avenue, South San Francisco, CA	**94080**
(Address of principal executive offices)	*(Zip Code)*

(650) 624-3000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, $0.001 par value	The NASDAQ Capital Market

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 ☐ Smaller reporting company ☐
(Do not check if a smaller reporting company)

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the voting and non-voting common equity held by non-affiliates was $259.6 million, computed by reference to the last sales price of $6.72 as reported by the NASDAQ Market as of June 30, 2015. This calculation does not reflect a determination that certain persons are affiliates of the Registrant for any other purpose. The number of shares of common stock held by non-affiliates excluded 96,371 shares of common stock held by directors, officers and affiliates of directors. The number of shares owned by affiliates of directors was determined based upon information supplied by such persons and upon Schedules 13D and 13G, if any, filed with the SEC. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant, that such person is controlled by or under common control with the Registrant, or that such persons are affiliates for any other purpose.

The number of shares outstanding of the Registrant's common stock on February 26, 2016 was 39,592,808 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for its 2016 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission, no later than 120 days after the end of the fiscal year, are incorporated by reference into Part III of this Annual Report on Form 10-K.

CYTOKINETICS, INCORPORATED

FORM 10-K
Year Ended December 31, 2015

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PART I

This report contains forward-looking statements indicating expectations about future performance and other forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. We intend that such statements be protected by the safe harbor created thereby. Forward-looking statements involve risks and uncertainties and our actual results and the timing of events may differ significantly from the results discussed in the forward-looking statements. Examples of such forward-looking statements include, but are not limited to, statements about or relating to:

- guidance concerning revenues, research and development expenses and general and administrative expenses for 2016;
- the sufficiency of existing resources to fund our operations for at least the next 12 months;
- our capital requirements and needs for additional financing;
- the initiation, design, conduct, enrollment, progress, timing and scope of clinical trials and development activities for our drug candidates conducted by ourselves or our partners, Amgen Inc. and Astellas Pharma Inc. ("Astellas"), including the anticipated timing for initiation of clinical trials, anticipated rates of enrollment for clinical trials and anticipated timing of results becoming available or being announced from clinical trials;
- the results from the clinical trials and non-clinical and preclinical studies of our drug candidates and other compounds, and the significance and utility of such results;
- anticipated interactions with regulatory authorities;
- the further development of tirasemtiv for the potential treatment of amyotrophic lateral sclerosis ("ALS");
- the expected acceptability by regulatory authorities of the effects of tirasemtiv on slow vital capacity or other measures of clinical benefit related to respiratory function in patients with ALS as a Phase 3 clinical trial endpoint to support the registration of tirasemtiv as a treatment for ALS;
- our and our partners' plans or ability to conduct the continued research and development of our drug candidates and other compounds;
- the potential advancement of omecamtiv mecarbil into Phase 3 clinical development;
- our expected roles in research, development or commercialization under our strategic alliances with Amgen and Astellas;
- the properties and potential benefits of, and the potential market opportunities for, our drug candidates and other compounds, including the potential indications for which they may be developed;
- the sufficiency of the clinical trials conducted with our drug candidates to demonstrate that they are safe and efficacious;
- our receipt of milestone payments, royalties, reimbursements and other funds from current or future partners under strategic alliances, such as with Amgen or Astellas;
- our ability to continue to identify additional potential drug candidates that may be suitable for clinical development;
- our plans or ability to commercialize drugs with or without a partner, including our intention to develop sales and marketing capabilities;
- the focus, scope and size of our research and development activities and programs;
- the utility of our focus on the biology of muscle function, and our ability to leverage our experience in muscle contractility to other muscle functions;

- our ability to protect our intellectual property and avoid infringing the intellectual property rights of others;
- expected future sources of revenue and capital;
- losses, costs, expenses and expenditures;
- future payments under loan and lease obligations;
- potential competitors and competitive products;
- retaining key personnel and recruiting additional key personnel;
- expected timing for recognition of compensation cost related to unvested stock options; and
- the potential impact of recent accounting pronouncements on our financial position or results of operations.

Such forward-looking statements involve risks and uncertainties, including, but not limited to:

- further clinical development of tirasemtiv for the potential treatment of ALS will require significant additional funding and we may be unable to obtain such additional funding on acceptable terms, if at all;
- the U.S. Food and Drug Administration ("FDA") and/or other regulatory authorities may not accept effects on respiratory function, including slow vital capacity, as an appropriate clinical trial endpoint to support the registration of tirasemtiv for the treatment of ALS;
- Amgen's decisions with respect to the timing, design and conduct of research and development activities for omecamtiv mecarbil and related compounds, including decisions to postpone or discontinue research or development activities relating to omecamtiv mecarbil and related compounds;
- Astellas' decisions with respect to the timing, design and conduct of research and development activities for CK-2127107 and other skeletal muscle activators, including decisions to postpone or discontinue research or development activities relating to CK-2127107 and other skeletal muscle activators;
- our ability to enter into strategic partnership agreements for any of our programs on acceptable terms and conditions or in accordance with our planned timelines;
- our ability to obtain additional financing on acceptable terms, if at all;
- our receipt of funds and access to other resources under our current or future strategic alliances;
- difficulties or delays in the development, testing, manufacturing or commercialization of our drug candidates;
- difficulties or delays, or slower than anticipated patient enrollment, in our or partners' clinical trials;
- difficulties or delays in the manufacture and supply of clinical trial materials;
- failure by our contract research organizations, contract manufacturing organizations and other vendors to properly fulfill their obligations or otherwise perform as expected;
- results from non-clinical studies that may adversely impact the timing or the further development of our drug candidates and other compounds;
- the possibility that the FDA or foreign regulatory agencies may delay or limit our or our partners' ability to conduct clinical trials or may delay or withhold approvals for the manufacture and sale of our products;
- changing standards of care and the introduction of products by competitors or alternative therapies for the treatment of indications we target that may limit the commercial potential of our drug candidates;
- difficulties or delays in achieving market access and reimbursement for our drug candidates and the potential impacts of health care reform;

- changes in laws and regulations applicable to drug development, commercialization or reimbursement;
- the uncertainty of protection for our intellectual property, whether in the form of patents, trade secrets or otherwise;
- potential infringement or misuse by us of the intellectual property rights of third parties;
- activities and decisions of, and market conditions affecting, current and future strategic partners;
- accrual information provided by our contract research organizations and other vendors;
- potential ownership changes under Internal Revenue Code Section 382; and
- the timeliness and accuracy of information filed with the U.S. Securities and Exchange Commission (the "SEC") by third parties.

In addition such statements are subject to the risks and uncertainties discussed in the "Risk Factors" section and elsewhere in this document. Such statements speak only as of the date on which they are made, and, except as required by law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor 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.

Item 1. *Business*

Overview

We were incorporated in Delaware in August 1997 as Cytokinetics, Incorporated. We are a late-stage biopharmaceutical company focused on the discovery and developments of first-in-class muscle activators as potential treatment for debilitating diseases in which muscle performance is compromised and/or declining. Our research and development activities relating to the biology of muscle function have evolved from our knowledge and expertise regarding the cytoskeleton, a complex biological infrastructure that plays a fundamental role within every human cell. Our most advanced research and development programs relate to the biology of muscle function and are directed to small molecule modulators of the contractility of skeletal or cardiac muscle. We are also conducting earlier-stage research directed to other compounds with the potential to modulate muscle contractility and other muscle functions, such as growth, energetics and metabolism.

Our lead drug candidate from our skeletal muscle contractility program, tirasemtiv (formerly known as CK-2017357), is a fast skeletal muscle troponin activator. Cytokinetics retains exclusive rights to tirasemtiv and is independently developing this drug candidate for the potential treatment of ALS. We conducted a Phase 2 clinical trials program for tirasemtiv, including a Phase 2b clinical trial in patients with ALS, known as BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS). Based on the results of BENEFIT-ALS, we started a Phase 3 clinical development program for tirasemtiv in patients with ALS in July 2015 known as VITALITY-ALS (Ventilatory Investigation of Tirasemtiv and Assessment of Longitudinal Indices after Treatment for a Year in ALS). Tirasemtiv has been granted orphan drug designation and fast track status by the FDA and orphan medicinal product designation by the European Medicines Agency, in each case for the potential treatment of ALS.

We are also developing CK-2127107, a structurally distinct fast skeletal muscle troponin activator, under a strategic alliance with Astellas established in June 2013 and expanded in December 2014. Astellas holds an exclusive license to develop and commercialize CK-2127107 worldwide, subject to our development and commercialization participation rights. Under this strategic alliance, Cytokinetics conducted five Phase 1 clinical trials of CK-2127107 and started a Phase 2 clinical trial of CK-2127107 in patients with spinal muscular atrophy (SMA) in December 2015. CK-2127107 is also being evaluated for the potential use in other indications

associated with muscle weakness. We expect that Astellas will initiate a Phase 2 clinical trial in patients with chronic obstructive pulmonary disease ("COPD") in the first half of 2016. We are also conducting joint research with Astellas directed to next-generation skeletal muscle activators. Further details regarding our strategic alliance with Astellas can be found below in Item 1 of this report under "Research and Development Programs — Skeletal Muscle Contractility Program — CK-2127107 and Other Skeletal Muscle Activators — Astellas Strategic Alliance."

Our lead drug candidate from our cardiac muscle contractility program, omecamtiv mecarbil (formerly known as CK-1827452), is a novel cardiac muscle myosin activator that is being developed under a strategic alliance with Amgen. Amgen holds an exclusive license to develop and commercialize omecamtiv mecarbil worldwide, subject to our development and commercialization participation rights.

Omecamtiv mecarbil has been the subject of an extensive Phase 1 and Phase 2 clinical trials program. In October 2015, we announced the results of COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure), the last planned Phase 2 trial of omecamtiv mecarbil to be completed prior to a decision regarding the potential advancement of this drug candidate to Phase 3. COSMIC-HF was designed to assess the pharmacokinetics and tolerability of omecamtiv mecarbil dosed orally in patients with heart failure and left ventricular systolic dysfunction and its effects on echocardiographic measures of cardiac function. An intravenous formulation of omecamtiv mecarbil was studied in a Phase 2b clinical trial known as ATOMIC-AHF (Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure), which was designed to evaluate the safety and efficacy of omecamtiv mecarbil in patients with left ventricular systolic dysfunction who are hospitalized with acute heart failure. We expect to continue our joint research with Amgen directed to next-generation compounds in our cardiac muscle contractility program in 2016. Further details regarding our strategic alliance with Amgen can be found below in Item 1 of this report under "Research and Development Programs — Cardiac Muscle Contractility Program — Amgen Strategic Alliance."

All of our drug candidates have demonstrated evidence of potentially clinically relevant pharmacodynamic activity in humans. In 2016, we expect to continue to focus on translating the observed pharmacodynamic activity of these compounds into potentially meaningful clinical benefits for patients.

Following is a summary of the planned clinical development activities for our drug candidates:

Drug Candidate (Mechanism of Action)	Partnership Status	Potential Indication(s)	Stage of Development	Development Status and Planned Development Activities
Skeletal Muscle Contractility Program				
Tirasemtiv (fast skeletal muscle troponin activator)	Cytokinetics developing independently	ALS	Phase 3	• We started a Phase 3 clinical development program for tirasemtiv in patients with ALS in the third quarter of 2015. We anticipate that the trial will be fully enrolled in the first half of 2016.
CK-2127107 (fast skeletal muscle troponin activator)	Partnered with Astellas	SMA COPD	Phase 2	• We started a Phase 2 clinical trial in patients with SMA in December 2015. We anticipate that the trial will complete enrollment in the second half of 2016. • We anticipate that in the first half of 2016, Astellas will initiate a Phase 2 clinical trial in patients with chronic obstructive pulmonary disease ("COPD")
Cardiac Muscle Contractility Program				
Omecamtiv mecarbil (cardiac muscle myosin activator)	Partnered with Amgen	heart failure (oral administration)	Phase 2	• We reported results from COSMIC-HF in November 2015. • Expect to make a decision regarding the potential advancement to Phase 3 in the coming months.
Omecamtiv mecarbil (cardiac muscle myosin activator)	Partnered with Amgen	heart failure (IV administration)	Phase 2	• ATOMIC-HF completed in 2013.

All of our drug candidates have arisen from our cytoskeletal research activities. Our focus on the biology of the cytoskeleton distinguishes us from other biopharmaceutical companies, and potentially positions us to discover and develop novel therapeutics that may be useful for the treatment of severe diseases and medical conditions. Each of our drug candidates has a novel mechanism of action compared to currently marketed drugs, which we believe validates our focus on the cytoskeleton as a productive area for drug discovery. We intend to leverage our experience in muscle contractility in order to expand our current pipeline, and expect to identify additional potential drug candidates that may be suitable for clinical development.

Corporate Strategy

We are a late-stage biopharmaceutical company focused on discovering, developing and commercializing first-in-class muscle activators as potential treatments for debilitating diseases in which muscle performance is compromised and/or declining. As a leader in muscle biology and the mechanics of muscle performance, the company is developing small molecule drug candidates specifically engineered to increase muscle function and contractility. Over the next 5 years, our goal is to discover, develop and commercialize novel drug products that modulate muscle function in ways that may benefit people living with serious diseases or medical conditions, with the intent of establishing a fully integrated biopharmaceutical company.

The five key components of our Corporate Strategy, "Vision 2020: Empowering Our Future," are:

- *Conduct late-stage clinical development of novel, first-in-class muscle activators for the potential treatment of ALS, SMA, heart failure and other diseases impacting muscle function.* As we enter 2016, our portfolio consists of three products that are in mid-late stage clinical development in three therapeutic areas, namely ALS, SMA and heart failure. We believe that by focusing on these disease areas characterized by well-organized physician-investigator groups, significant unmet clinical needs, and strong patient and disease advocacy, we may enhance our effectiveness in enrolling and conducting clinical trials that may answer important questions about the dosing, tolerability, pharmacokinetics and pharmacodynamics as well as the potential safety and efficacy of our drug candidates. We believe that our considered clinical trial designs and well-executed development programs can improve our ability to realize value from our and our partners' clinical development activities. As we advance our drug candidates into later-stage clinical development, we extensively evaluate previous clinical trial designs and results to assess key learnings that may be applied to our late-stage clinical development activities. We believe this may result in more successful later-stage clinical development activities that may increase the likelihood of achieving our objectives to develop effective therapies that may address the needs of people living with these devastating diseases.
- *Collaborate with patient communities to support the urgent development of new medicines for diseases of impaired muscle function with pressing unmet medical needs.* Central to our corporate strategy are the people living with a disease or medical condition characterized by impaired muscle function. We focused our development and commercialization activities on diseases that lack effective therapies and, in some cases, those with no approved medicines. We recognize that by applying our extensive knowledge of muscle biology towards the development of novel therapies for the people living with these diseases, not only patients but their caregivers and families, we aim to improve their lives. As such, we need to collaborate with these individuals and their communities to ensure our therapeutics are addressing their urgent needs and that we understand and appreciate the issues associated with these diseases and conditions. We work collaboratively with entities, such as patient advocacy groups, that are focused on policies, guidelines and practices to accelerate development and commercialization of novel therapies, where possible and appropriate, and on ensuring that the voice of their constituency is heard.
- *Mature our company operations to enable development, registration and commercialization of muscle biology drug candidates across North America and Europe.* With a focus on disease areas for which there are serious unmet medical needs, we direct our activities to potential commercial opportunities in concentrated and tractable customer segments, such as hospital specialists and disease-specific centers of excellence, which may be addressed by a smaller, targeted sales force. In preparing for the potential commercialization of our drug candidates directed to these markets, we are focusing our activities on a broad range of issues facing patients and payors, including the principal drivers of clinical and economic burdens associated with these diseases. We also seek to focus on opportunities that the multiple constituencies and stakeholders for these markets may recognize as creating value. Accordingly, targeting unmet medical needs in these areas may provide us competitive opportunities and support development of a franchise in diseases involving muscle weakness, wasting and fatigue. In these markets, we believe that a company with limited resources may be able to compete effectively against larger, more established companies with greater financial and commercial resources. For these opportunities, we intend to develop clinical development and sales and marketing capabilities in North America and Europe with the goal of becoming a fully integrated biopharmaceutical company.
- *Advance next-generation skeletal and cardiac muscle activator compounds into clinical development by leveraging existing research collaborations.* We take a purpose-driven approach by leveraging our extensive muscle biology expertise to engineer compounds with specific characteristics aimed at treating diseases that impact muscle function. By increasing muscle strength and performance, the potential treatments we are developing may preserve and extend independence and self-reliance in people suffering from debilitating diseases. We have established select strategic alliances to support our drug development programs while preserving significant development and commercialization rights. We believe that such

alliances may allow us to obtain financial support and to capitalize on the therapeutic area expertise and resources of our partners that can potentially accelerate the development and commercialization of our drug candidates. Where we deem appropriate, we plan to retain certain rights to participate in the development of drug candidates and commercialization of potential drugs arising from our programs and alliances, so that we can expand and capitalize on our own internal development capabilities and build our commercialization capabilities.

- *Progress proprietary research programs focused on muscle metabolism, growth and energetics into development under new collaborations.* We believe that our extensive understanding of muscle biology and our proprietary research technologies should enable us to discover and potentially to develop drug candidates with novel mechanisms of action that may offer potential benefits not provided by existing drugs and which may have application across a broad array of diseases and medical conditions. We expect that we may be able to leverage our expertise in muscle contractility to expand programs related to other areas of muscle function and which may extend to the potential treatment of other serious medical diseases and conditions. Progressing related programs in parallel may afford us an opportunity to build a broader business that could benefit from multiple products that serve related clinical and commercial needs associated with impaired muscle function, muscle weakness and fatigue. In addition, this strategy may enable us to diversify certain technical, financial and operating risks by advancing several drug candidates in parallel.

Research and Development Programs

Our long-standing interest in the cytoskeleton has led us to focus our research and development activities on the biology of muscle function, and in particular, small molecule modulation of muscle contractility. We believe that our expertise in the modulation of muscle contractility is an important differentiator for us. Our preclinical and clinical experience in muscle contractility may position us to discover and develop additional novel therapies that have the potential to improve the health of patients with severe and debilitating diseases or medical conditions.

Small molecules that affect muscle contractility may have several applications for a variety of serious diseases and medical conditions. For example, certain diseases and medical conditions associated with muscle weakness may be amenable to treatment by enhancing the contractility of skeletal muscle. Similarly, heart failure is a disease often characterized by impaired cardiac muscle contractility which may be treated by modulating the contractility of cardiac muscle. Because the modulation of the contractility of different types of muscle, such as cardiac and skeletal muscle, may be relevant to multiple diseases or medical conditions, we believe we can leverage our expertise in these areas to more efficiently discover and develop potential drug candidates that modulate the applicable muscle type for multiple indications.

We are currently developing a number of small molecule compounds arising from our muscle contractility programs.

Tirasemtiv is our lead drug candidate from our skeletal muscle contractility program. Potential indications for which this drug candidate may be useful include skeletal muscle weakness associated with neuromuscular diseases, such as ALS. We have conducted a Phase 2 clinical trials program for tirasemtiv, and started a Phase 3 clinical development program of this drug candidate in patients with ALS in the July 2015.

CK-2127107, another drug candidate from this program, is partnered with Astellas world-wide for the potential treatment of SMA and potentially other neuromuscular and non-neuromuscular indications associated with muscle weakness. We conducted a Phase 1 clinical trials program for CK-2127107 under this collaboration. We started a Phase 2 clinical trial of CK-2127107 in patients with SMA in December 2015. We anticipate that in the first half of 2016, Astellas will initiate a Phase 2 clinical trial in patients with chronic obstructive pulmonary disease (“COPD”). Cytokinetics and Astellas continue to evaluate other indications which may be suitable for CK-2127107 or other skeletal sarcomere activators under the collaboration.

Omecamtiv mecarbil, a novel cardiac muscle myosin activator, is partnered with Amgen world-wide for the potential treatment of heart failure. Phase 2 clinical trials were conducted with both intravenous and oral formulations of omecamtiv mecarbil. An intravenous formulation of omecamtiv mecarbil was studied in ATOMIC-AHF, a Phase 2b clinical trial in patients with acute heart failure, and an oral formulation of omecamtiv mecarbil was studied in COSMIC-HF, a Phase 2 clinical trial in patients with heart failure.

We are continuing to conduct discovery, characterization and lead optimization activities for other compounds with the potential to modulate muscle contractility and other muscle functions, such as growth, energetics and metabolism.

Research and Development Expense. Our research and development expenses were $46.4 million, $44.4 million and $49.5 million for 2015, 2014 and 2013, respectively.

Skeletal Muscle Contractility Program

Overview. Our skeletal muscle contractility program is focused on the activation of the skeletal sarcomere, the basic unit of skeletal muscle contraction. The skeletal sarcomere is a highly ordered cytoskeletal structure composed of skeletal muscle myosin, actin, and a set of regulatory proteins, which include the troponins and tropomyosin. This program leverages our expertise developed in our ongoing discovery and development of cardiac sarcomere activators, including the cardiac muscle myosin activator omecamtiv mecarbil.

We believe that our skeletal sarcomere activators may lead to new therapeutic options for diseases and medical conditions associated with aging, muscle weakness and wasting and neuromuscular dysfunction. The clinical effects of muscle weakness and wasting, fatigue and loss of mobility can range from decreased quality of life to, in some instances, life-threatening complications. By directly improving skeletal muscle function, a small molecule activator of the skeletal sarcomere potentially could enhance functional performance and quality of life in patients suffering from diseases or medical conditions characterized or complicated by muscle weakness or wasting. These may include diseases and medical conditions associated with skeletal muscle weakness or wasting, such as ALS, claudication, myasthenia gravis, sarcopenia (general frailty associated with aging), post-surgical rehabilitation and cachexia in connection with heart failure or cancer.

Tirasemtiv is the lead drug candidate from this program. We retain exclusive rights to tirasemtiv. We have conducted a Phase 2 clinical development program for tirasemtiv, and we started a Phase 3 clinical trial for this drug candidate in patients with ALS in July 2015. We are also developing another drug candidate from this program, CK-2127107, which has been evaluated in Phase 1 clinical trials in collaboration with Astellas for potential indications associated with muscle weakness. We started a Phase 2 clinical trial for CK-2127107 in patients with SMA in December 2015 Tirasemtiv and CK-2127107 are structurally distinct and selective small molecules that activate the fast skeletal muscle troponin complex in the sarcomere by increasing its sensitivity to calcium, leading to an increase in skeletal muscle contractility. Each of tirasemtiv and CK-2127107 has demonstrated pharmacological activity in preclinical models and evidence of potentially clinically relevant pharmacodynamic effects in humans. We are evaluating other potential indications for which tirasemtiv and CK-2127107 may be useful.

Tirasemtiv. Tirasemtiv, a fast skeletal troponin activator, is the lead drug candidate from our skeletal muscle contractility program. We conducted three “evidence of effect” Phase 2a clinical trials, including two Phase 2 dosing trials, of tirasemtiv. These evidence of effect clinical trials were randomized, double-blind, placebo-controlled, three-period cross-over studies of single doses of tirasemtiv administered to patients with impaired muscle function. These studies were intended to translate the mechanism of action of tirasemtiv into potentially clinically relevant pharmacodynamic effects. The first of these trials was conducted in patients with ALS, a chronic and progressive disease in which the motor neurons die, thus denervating skeletal muscles and causing them to atrophy. This leads to weakness, fatigue, and eventually complete paralysis and death, primarily from respiratory complications. The second of these trials was conducted in patients with myasthenia gravis, a

chronic, autoimmune, neuromuscular disease which is the most common primary disorder of neuromuscular transmission. The third of these trials was conducted in patients with symptoms of claudication, which is pain or cramping in the leg muscles due to inadequate blood flow during exercise, associated with peripheral artery disease. Evidence of potentially clinically relevant pharmacodynamic effects was observed in each of these trials.

In 2014, we completed BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS), a Phase 2b clinical trial of tirasemtiv in patients with ALS and reported the results from BENEFIT-ALS in April 2014. We concluded that in this trial effects observed on slow vital capacity ("SVC"), a measure of the strength of the skeletal muscles responsible for breathing, in patients treated with tirasemtiv were robust and potentially clinically meaningful and support further evaluation of tirasemtiv in a Phase 3 clinical trial, known as VITALITY-ALS (Ventilatory Investigation of Tirasemtiv and Assessment of Longitudinal Indices after Treatment for a Year in ALS).

Tirasemtiv Clinical Development

BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS). In 2012, we initiated BENEFIT-ALS, a Phase 2b, multi-national, double-blind, randomized, placebo-controlled, clinical trial designed to evaluate the safety, tolerability and efficacy of tirasemtiv in patients with ALS.

In 2014, BENEFIT-ALS results were presented at the 66th Annual Meeting of the American Academy of Neurology. BENEFIT-ALS did not achieve its primary efficacy endpoint, the mean change from baseline in the ALS Functional Rating Scale in its revised form (ALSFRS-R; $p = 0.11$). Treatment with tirasemtiv resulted in a statistically significant and potentially clinically meaningful reduction in the decline of slow vital capacity (SVC), a measure of the strength of the skeletal muscles responsible for breathing. SVC has been shown to be an important predictor of disease progression and survival in prior trials of patients with ALS. At week 12, the decline in SVC from baseline was -3.12 for patients receiving tirasemtiv versus -8.66 for those receiving placebo ($p < 0.0001$). From week 0 to week 12, the slope of decline in SVC measured as percentage points per day was -0.0394 for patients receiving tirasemtiv versus -0.0905 for those receiving placebo ($p = 0.0006$).

The analyses of other pre-specified secondary efficacy endpoints in BENEFIT-ALS produced mixed results. The muscle strength mega-score, a measure of strength combining the data from several muscle groups in each patient, declined more slowly on tirasemtiv versus placebo. The difference in the rate of decline for sniff nasal inspiratory pressure (SNIP) was not statistically significant); however, SNIP decreased more on tirasemtiv compared with placebo in a statistically significant manner at 4 and 12 weeks. No differences in maximum voluntary ventilation and hand grip fatigue were observed on tirasemtiv versus placebo.

Serious adverse events (SAEs) during double-blind treatment were more frequent on tirasemtiv than on placebo (9.0% vs. 5.4%). The most common SAE was respiratory failure which occurred in 1 patient on tirasemtiv and 3 patients on placebo. Confusional state and delirium occurred in 2 patients on tirasemtiv and no patients on placebo. More patients on tirasemtiv withdrew from the trial following randomization than on placebo (99 vs. 33 patients, respectively). Adverse events more common on tirasemtiv than on placebo (>10% difference) were dizziness, fatigue, and nausea.

Throughout the remainder of 2014, we presented further results from BENEFIT-ALS. These results indicated that:

- Differences in the decline in SVC on tirasemtiv versus placebo observed after 12 weeks of double-blind treatment were maintained for up to 4 weeks after discontinuation of treatment;
- The reduced decline in SVC on tirasemtiv versus placebo was observed consistently across all subgroups of patients in BENEFIT-ALS that were examined;
- The effects of tirasemtiv on SVC were observed at all doses studied and the concentration-response relationship was flat; and

- Riluzole did not increase plasma concentrations nor impact the tolerability of tirasemtiv.

Later in 2014, we announced that we had completed our review of results from BENEFIT-ALS and concluded that effects observed on SVC in patients treated with tirasemtiv were robust and potentially clinically meaningful. We engaged with regulatory authorities in the U.S. and Europe regarding results from BENEFIT-ALS and have advanced tirasemtiv into Phase 3 clinical development.

VITALITY-ALS (Ventilatory Investigation of Tirasemtiv and Assessment of Longitudinal Indices after Treatment for a Year in ALS): In July 2015, we started VITALITY-ALS, a Phase 3 clinical trial designed to assess the effects of tirasemtiv versus placebo on slow vital capacity and other measures of respiratory function in patients with ALS. VITALITY-ALS is designed to confirm and extend the results observed in BENEFIT-ALS.

VITALITY-ALS is a multi-national, randomized, double-blind, placebo-controlled trial that was originally designed to enroll 445 patients with possible, probable or definite ALS diagnosed within 24 months, and with a baseline vital capacity > 70 % of predicted, based on age, sex, and height. Patients may be enrolled whether or not they are on riluzole therapy. The primary endpoint of the trial will assess change from baseline in SVC, to be assessed after 24 weeks of double-blind, placebo-controlled treatment. Secondary endpoints include time to decline from baseline in percent predicted SVC by 20 percentage points or the onset of respiratory insufficiency or death; time to decline from baseline in percent predicted SVC to ≤ 50 percent predicted or the onset of respiratory insufficiency or death; time to first occurrence of any use of assisted ventilation or death; time to decline in any of the three respiratory domains of the ALSFRS-R or death; and change in the Mega-Score of muscle strength.

Patients enrolled in VITALITY-ALS will receive two-weeks of open-label treatment with tirasemtiv administered at 250 mg/day and will then be randomized to double-blind treatment with placebo or one of three target tirasemtiv dose levels (250 mg/day, 375 mg/day, 500 mg/day) in a 3:2:2:2 ratio for a total of 48 weeks of randomized, double-blind, placebo-controlled treatment. Then in a four-week double-blind, tirasemtiv withdrawal phase, patients on tirasemtiv will be randomized either to continue the double-blind tirasemtiv dose they were receiving or to be withdrawn to placebo in a 1:1 ratio. Patients who had been receiving placebo during the 48 weeks of double-blind, placebo-controlled treatment will continue to receive placebo. We expect VITALITY-ALS to be conducted in more than 75 centers in 11 countries in North America and Europe and to include most of the sites who participated in BENEFIT-ALS.

The design of VITALITY-ALS addresses certain observations from BENEFIT-ALS. VITALITY-ALS provides for a longer open label phase (one week in BENEFIT-ALS versus two weeks in VITALITY-ALS) prior to patient randomization. The longer open label phase in VITALITY-ALS provides more time for patients to acclimate to potential side effects of tirasemtiv to potentially reduce the rate of early termination on study medication post randomization as compared to BENEFIT-ALS. In addition, VITALITY-ALS randomizes patients to three different target dose levels to evaluate the potential effect of dose on the safety, tolerability and efficacy of tirasemtiv. Patients in BENEFIT-ALS were randomized to one target dose level of 500 mg/day and investigators were encouraged to up-titrate patients to their maximally tolerated dose levels. In addition in VITALITY-ALS, patients are up-titrated more slowly (two weeks at each dose level before up-titration in VITALITY-ALS versus one week in BENEFIT-ALS). We believe these and other design changes in VITALITY-ALS may decrease the rate of early terminations on tirasemtiv after randomization compared to the rate we observed after randomization in BENEFIT-ALS.

In 2015, we focused on the start-up phase of VITALITY-ALS, activating and initiating patient enrollment in a majority of the clinical trial sites in North America that are expected to participate in the trial. In the first quarter of 2016, we expect to activate other clinical trial sites in North America and Europe. VITALITY-ALS is expected to complete enrollment in the first half of 2016 with results anticipated in the third quarter of 2017.

In January 2016, we amended the protocol of VITALITY-ALS to provide for an increase in the number of patients to be enrolled in the clinical trial from approximately 445 patients to approximately 600 patients.

Increasing the number of patients enrolled in VITALITY-ALS will increase the statistical power to detect a difference in the primary efficacy endpoint (change from baseline in SVC at 24 weeks) between *tirasemtiv* and placebo.

Also in January 2016, in collaboration with Knopp Biosciences, we presented exploratory analyses of data from patients with ALS combined from three different sources: First, the placebo data from EMPOWER, the Phase 3 clinical trial of Knopp's dexpramipexole in patients with ALS, second, the placebo data from Cytokinetics' Phase 2b study of tirasemtiv in patients with ALS, BENEFIT-ALS, and finally, the open-access Pro-Act database. These combined databases included multiple observations of SVC over time from over 900 patients with ALS. Our analyses of this combined database demonstrated that the rate of decline of SVC predicts the risk of meaningful clinical events, including a decline in any one of the three respiratory questions of the ALSFRS-R, as well as the time to the first occurrence of respiratory insufficiency, tracheostomy or death.

In July 2015, we were awarded a $1.5 million grant from The ALS Association (the "ALSA Grant") to support the conduct of VITALITY-ALS as well as the collection of clinical data and plasma samples from patients in VITALITY-ALS in order to help advance the discovery of potentially useful biomarkers in ALS. The grant provides funding for collaboration among Cytokinetics, The ALS Association and the Barrow Neurological Institute to enable plasma samples collected from patients enrolled in VITALITY-ALS to be added to The Northeastern ALS Consortium (NEALS) Repository, a resource for the academic research community to identify biomarkers that may help to assess disease progression and underlying disease mechanisms in ALS. On August 28, 2015 Cytokinetics achieved its first milestone under the ALSA Grant which triggered a payment of $0.5 million in accordance with the ALSA Grant. We recorded $0.1 million as grant revenue as qualified expenses were incurred and approved by management. At December 31, 2015, we had $0.4 million of deferred revenue under the ALSA Grant, reflecting the unrecognized portion of the grant revenue.

Tirasemtiv Strategic and Commercial Planning. During 2015, we continued preparing for the potential commercialization of tirasemtiv. These activities included interactions with manufacturers, and corporate development and commercial planning activities to support various scenarios. We expect to continue to engage extensively with ALS experts, both neuromuscular and pulmonary, and with payors, regulatory authorities and patient advocacy groups as we develop plans for the potential commercialization of tirasemtiv as a treatment for patients living with ALS. These commercialization plans will include market assessment and corporate development activities to support the launch of tirasemtiv in the U.S. and Europe, if appropriate.

Background on ALS Market. Limited options exist for the treatment of patients with ALS, which affects as many as 30,000 Americans, with an estimated 5,600 new cases diagnosed each year in the U.S. Based on our primary market research, the per capita prevalence and incidence appears similar in the major European markets. ALS is 20% more common in men than women; however, with increasing age, the prevalence becomes more equal between men and women. The life expectancy of an ALS patient averages two to five years from the time of diagnosis, mostly due to respiratory issues. Of the patients diagnosed with ALS, 5 to 10% have a family history of the disease (familial ALS) and remaining 90 to 95% have the sporadic form. The majority of patients with ALS in the U.S. and Europe receive treatment at multidisciplinary centers that specialize in the unique needs of these patients. In the U.S., there are approximately 104 ALS centers of excellence, according to either the ALS Association or the Muscular Dystrophy Association. For most patients with ALS, death is usually due to respiratory failure because of diminished strength in the skeletal muscles responsible for breathing. We believe that the majority of ALS patients in the U.S. and Europe are treated at ALS centers of excellence; therefore, it is a concentrated market. We believe that there is a need for novel therapies to address the urgent unmet medical issues of this patient population which could be addressed by a small, targeted sales force. If tirasemtiv is approved by regulatory authorities in the U.S. or Europe for commercialization for ALS, we believe that we may be able to independently commercialize tirasemtiv in these concentrated markets.

CK-2127107 and Other Skeletal Muscle Activators

Astellas Strategic Alliance. CK-2127107 is being developed jointly by Cytokinetics and Astellas. In December 2014, we entered into an Amended and Restated License and Collaboration Agreement with Astellas (the "Amended Astellas Agreement"). This agreement superseded the License and Collaboration Agreement between Cytokinetics and Astellas of June 2013 (the "Original Astellas Agreement"). The Amended Astellas Agreement expanded the objective of the collaboration of advancing novel therapies for diseases and medical conditions associated with muscle weakness to include SMA and potentially other neuromuscular indications for CK-2127107 and other fast skeletal troponin activators, in addition to the non-neuromuscular indications provided for in the Original Astellas Agreement.

Under the Amended Astellas Agreement, we expanded the exclusive license previously granted Astellas under the Original Astellas Agreement to co-develop and commercialize CK-2127107 for potential application in non-neuromuscular indications worldwide to include certain neuromuscular indications as well. Concurrent with the expanded collaboration, the companies agreed to advance CK-2127107 into Phase 2 clinical development. Cytokinetics started a Phase 2 clinical trial of CK-2127107 in patients with SMA in December 2015. The development program may include other neuromuscular indications as the companies may agree. Cytokinetics and Astellas will jointly develop and may jointly commercialize CK-2127107 and other fast skeletal troponin activators in neuromuscular indications. Astellas will be responsible for the costs associated with the development of all collaboration products, including CK-2127107, subject to Cytokinetics' option to co-fund certain development costs as described below.

Under the Amended Astellas Agreement, the parties extended through 2016 their joint research program to identify next-generation skeletal muscle activators to be nominated as potential drug candidates. This research will be conducted at Astellas' expense. Under the Amended Astellas Agreement, Astellas has exclusive rights to co-develop and commercialize CK-2127107 and other fast skeletal troponin activators in SMA and potentially other indications and other novel mechanism skeletal muscle activators in all indications, subject to certain Cytokinetics' development and commercialization rights. Cytokinetics may co-promote and conduct certain commercial activities in the U.S., Canada and Europe under agreed scenarios.

Cytokinetics retains an option to conduct early-stage development for certain agreed indications at its initial expense, subject to reimbursement if development continues under the collaboration. Under the Amended Astellas Agreement, Cytokinetics also retains an option to co-promote collaboration products containing fast skeletal muscle activators for neuromuscular indications in the U.S., Canada and Europe, in addition to its option to co-promote other collaboration products in the U.S. and Canada as provided for in the Original Astellas Agreement. Astellas will reimburse Cytokinetics for certain expenses associated with its co-promotion activities. The Amended Astellas Agreement also provides for Cytokinetics to lead certain activities relating to the commercialization of collaboration products for neuromuscular indications in the U.S., Canada and Europe under particular scenarios.

Cytokinetics received a non-refundable upfront payment of $30.0 million in connection with the execution of the Amended Astellas Agreement. Also, in conjunction with the execution of the Amended Astellas Agreement, we entered into a common stock purchase agreement which provided for the sale of 2,040,816 shares of our common stock to Astellas at a price per share of $4.90 and an aggregate purchase price of $10.0 million, which was received in December 2014. Pursuant to this agreement, Astellas agreed to certain trading and other restrictions with respect to our common stock. Concurrently, Cytokinetics earned a $15.0 million milestone payment relating to Astellas' decision to advance CK-2127107 into Phase 2 clinical development. Cytokinetics is also eligible to potentially receive over $20.0 million in reimbursement of sponsored research and development activities during the two years of the collaboration following the execution of the Amended Astellas Agreement.

Based on the achievement of pre-specified criteria, Cytokinetics may receive over $600.0 million in milestone payments relating to the development and commercial launch of collaboration products, including up

to $112.0 million (of which Cytokinetics has now received $17.0 million) relating to early development of CK-2127107 and for later-stage development and commercial launch milestones for CK-2127107 in non-neuromuscular indications, and over $100.0 million in development and commercial launch milestones for CK-2127107 in each of SMA and other neuromuscular indications. Cytokinetics may also receive up to $200.0 million in payments for achievement of pre-specified sales milestones related to net sales of all collaboration products under the Amended Astellas Agreement. If Astellas commercializes any collaboration products, Cytokinetics will also receive royalties on sales of such collaboration products, including royalties ranging from the high single digits to the high teens on sales of products containing CK-2127107. Cytokinetics also holds an option to co-fund certain development costs for CK-2127107 and other compounds in exchange for increased milestone payments and royalties; such royalties may increase under certain scenarios to exceed twenty percent. In addition to the foregoing development, commercial launch and sales milestones, Cytokinetics may also receive payments for the achievement of pre-specified milestones relating to the joint research program.

Cytokinetics retains the exclusive right to develop and commercialize tirasemtiv for the potential treatment of ALS and certain other neuromuscular disorders independently from the Amended Astellas Agreement.

CK-2127107 Clinical Development

Phase 1 Clinical Trials Program: We completed five Phase 1 clinical trials evaluating safety, tolerability and pharmacokinetics and pharmacodynamics of CK-2127107 in both oral tablet and liquid suspension formulations in healthy volunteers. These include a single ascending dose study (Study CY 5011), a multiple ascending dose study in young vs. elderly subjects (CY 5012), a PK/PD study (CY 5013), a formulation study (CY 5014) and a food effect study (CY 5015). The Phase 1 clinical trials demonstrated that CK-2127107 appeared well-tolerated in healthy volunteers and that exposures generally increased across the dose ranges studied. CK-2127107 increased the response of muscle to neuromuscular input in a dose and plasma concentration related fashion in healthy volunteers consistent with preclinical observations. In addition, an oral tablet formulation of CK-2127107 appears appropriate for use in Phase 2 clinical trials.

Phase 2 Clinical Development: Cytokinetics started a Phase 2 clinical trial of CK-2127107 in patients with SMA (CY 5021) in December 2015. The clinical trial is designed to assess effects of CK-2127107 on multiple measures of muscle function in both ambulatory and non-ambulatory patients with SMA. a severe, genetic neuromuscular disease that leads to debilitating muscle wasting and progressive, often fatal, muscle weakness. The primary objective of this double-blind, randomized, placebo-controlled clinical trial is to determine the potential pharmacodynamic effects of a suspension formulation of CK-2127107 following multiple oral doses in patients with Type II, Type III, or Type IV SMA. Secondary objectives are to evaluate the safety, tolerability and pharmacokinetics of CK-2127107. The trial will enroll seventy-two patients in two sequential, ascending dose cohorts (two cohorts of 36 patients each, stratified half ambulatory and half non- ambulatory).

The first cohort of patients will receive 150 mg of CK-2127107 dosed twice daily for eight weeks; the second cohort of patients will receive 450 mg of CK-2127107 dosed twice daily or a lower dose, depending on the data from the first cohort. At the conclusion of the trial, approximately 24 patients will have been randomized to placebo, approximately 24 patients to 150 mg of CK-2127107 twice daily and approximately 24 patients to 450 mg of CK-2127107 twice daily (or a lower dose, pending the review of data from the first cohort). In each of these three treatment groups of approximately 24 patients each, roughly half will be ambulatory and half will be non-ambulatory. Multiple assessments of skeletal muscle function and fatigability will be performed including respiratory assessments, upper limb strength and functionality for non-ambulatory patients, as well as six-minute walk and timed-up-and-go for ambulatory patients.

An additional Phase 2 clinical trial to be conducted by Astellas in collaboration with Cytokinetics, will study CK-2127107 in patients with chronic obstructive pulmonary disorder (“COPD”) and is expected to be initiated in the first half of 2016.

Background on SMA Market: Spinal muscular atrophy (SMA) is a severe neuromuscular disease that occurs in 1 in every 6,000 to 10,000 live births each year resulting in a prevalence of 10,000 to 25,000 patients in the U.S., and is one of the most common fatal genetic disorders. SMA manifests in various degrees of severity as progressive muscle weakness resulting in respiratory and mobility impairment. There are four types of SMA, distinguished by the time of the initial onset of muscle weakness and the severity of related symptoms: Type I (severe), Type II (intermediate), Type III (juvenile) and Type IV (adult onset). Life expectancy and disease severity varies by type of SMA from Type I, who have the worst prognosis and a life expectancy of approximately two years from birth, to Type IV, who have a normal life span but with gradual weakness in the proximal muscles of the extremities resulting in mobility issues. Type II, III and IV patients are often characterized by their ambulatory status as it is an important driver of clinical decisions and care. Few treatment options exist for these patients, resulting in a high unmet need for new therapeutic options to ameliorate symptoms, improve muscle function and modify disease progression.

Ongoing Research in Skeletal Muscle Activators. Our research on the direct activation of skeletal muscle continues in two areas. We are conducting translational research in preclinical models of disease and muscle function with fast skeletal muscle troponin activators to explore the potential clinical applications of this novel mechanism in diseases or conditions associated with skeletal muscle dysfunction. We also intend to conduct preclinical research on other chemically and pharmacologically distinct mechanisms to activate the skeletal sarcomere. We are conducting a joint research program with Astellas directed to the discovery of next-generation skeletal muscle activators. Under the Amended Astellas Agreement, the joint research program will continue through 2016 and Astellas will reimburse us for certain research activities we perform.

Cardiac Muscle Contractility Program

Overview. Our cardiac muscle contractility program is focused on the cardiac sarcomere, the basic unit of muscle contraction in the heart. The cardiac sarcomere is a highly ordered cytoskeletal structure composed of cardiac muscle myosin, actin and a set of regulatory proteins. This program is currently directed towards the discovery and development of small molecule cardiac muscle myosin activators with the goal of developing novel drugs to treat acute and chronic heart failure. Cardiac muscle myosin is the cytoskeletal motor protein in the cardiac muscle cell. It is directly responsible for converting chemical energy into the mechanical force, resulting in cardiac muscle contraction. This program is based on the hypothesis that activators of cardiac muscle myosin may address certain adverse properties of existing positive inotropic agents. Current positive inotropic agents, such as beta-adrenergic receptor agonists or inhibitors of phosphodiesterase activity, increase the concentration of intracellular calcium, thereby increasing cardiac sarcomere contractility. The effect on calcium levels, however, also has been linked to potentially life-threatening side effects. In contrast, our novel cardiac muscle myosin activators work by a mechanism that directly stimulates the activity of the cardiac muscle myosin motor protein, without increasing the intracellular calcium concentration. They accelerate the rate-limiting step of the myosin enzymatic cycle and shift it in favor of the force-producing state. Rather than increasing the velocity of cardiac contraction, this mechanism instead lengthens the systolic ejection time, which results in increased cardiac function in a potentially more oxygen-efficient manner.

Amgen Strategic Alliance. In December 2006, we entered into a collaboration and option agreement with Amgen to discover, develop and commercialize novel small molecule therapeutics, including omecamtiv mecarbil, that activate cardiac muscle contractility for potential applications in the treatment of heart failure (the "Amgen Agreement"). The agreement granted Amgen an option to obtain an exclusive license worldwide, except Japan, to develop and commercialize omecamtiv mecarbil and other drug candidates arising from the collaboration. In May 2009, Amgen exercised its option. As a result, Amgen became responsible for the development and commercialization of omecamtiv mecarbil and related compounds at its expense worldwide (excluding Japan), subject to our development and commercialization participation rights. Amgen reimburses us for certain research and development activities we perform under the collaboration.

In June 2013, Cytokinetics and Amgen executed an amendment to the Amgen Agreement to include Japan, resulting in a worldwide collaboration (the "Amgen Agreement Amendment"). Under the terms of the Amgen

Agreement Amendment, we received a non-refundable upfront license fee of $15.0 million in June 2013. Under the Amgen Agreement Amendment, we conducted a Phase 1 pharmacokinetic study intended to support inclusion of Japan in a potential Phase 3 clinical development program and potential global registration dossier for omecamtiv mecarbil. Amgen reimbursed us for the costs of this study. In addition, we are eligible to receive additional pre-commercialization milestone payments relating to the development of omecamtiv mecarbil in Japan of up to $50.0 million, and royalties on sales of omecamtiv mecarbil in Japan. In conjunction with the Amgen Agreement Amendment, we also entered into a common stock purchase agreement which provided for the sale of 1,404,100 shares of our common stock to Amgen at a price per share of $7.12 and an aggregate purchase price of $10.0 million which was received in June 2013. Pursuant to this agreement, Amgen agreed to certain trading and other restrictions with respect to our common stock.

Under the Amgen Agreement as amended we are eligible for potential pre-commercialization and commercialization milestone payments of over $650.0 million in the aggregate on omecamtiv mecarbil and other potential products arising from research under the collaboration, and royalties that escalate based on increasing levels of annual net sales of products commercialized under the agreement. The Amgen Agreement also provides for us to receive increased royalties by co-funding Phase 3 development costs of omecamtiv mecarbil and other drug candidates under the collaboration. If we elect to co-fund such costs, we would be entitled to co-promote the co-funded drug in North America and participate in agreed commercialization activities in institutional care settings, at Amgen's expense.

In July 2013, Amgen announced that it had granted an option to commercialize omecamtiv mecarbil in Europe to Servier, with Cytokinetics' consent. The option and, if the option is exercised, the resulting commercialization sublicense to Servier, is subject to the terms and conditions of the Amgen Agreement. Amgen remains responsible for the performance of its obligations under the Amgen Agreement relating to Europe, including the payment of milestones and royalties relating to the development and commercialization of omecamtiv mecarbil in Europe.

Omecamtiv Mecarbil. Our lead drug candidate from this program is omecamtiv mecarbil, a novel cardiac muscle myosin activator. We expect omecamtiv mecarbil to be developed as a potential treatment across the continuum of care in heart failure both for use in the hospital setting and for use in the outpatient setting.

Omecamtiv Mecarbil Clinical Development

Phase 2 Clinical Development Program

COSMIC-HF. COSMIC-HF is a Phase 2, double-blind, randomized, placebo-controlled, multicenter, clinical trial designed to assess the pharmacokinetics and tolerability of *omecamtiv mecarbil* dosed orally in patients with heart failure and left ventricular systolic dysfunction as well as its effects on echocardiographic measures of cardiac function. COSMIC-HF was conducted by Amgen in collaboration with Cytokinetics. The study began with two dose escalation cohorts of 40 patients each, randomized 1:1:1:1 to placebo or one of three different modified release oral formulations of *omecamtiv mecarbil* for seven days. The *omecamtiv mecarbil* dose in the first of these two dose escalation cohorts was 25 mg twice daily; in the second, it was 50 mg twice daily. The purpose of the dose escalation cohorts was to select one of the three modified release oral formulations of *omecamtiv mecarbil* for further evaluation in a larger group of patients treated for a longer period of time.

The expansion phase of COSMIC-HF was designed to evaluate the pharmacokinetics, pharmacodynamics, safety and tolerability of the modified release oral formulation *omecamtiv mecarbil* selected based on the results of the two dose escalation cohorts in 448 patients with chronic heart failure and left ventricular systolic dysfunction. Patients were randomized 1:1:1 to receive either placebo or treatment with *omecamtiv mecarbil* 25 mg twice daily or a dose titration group where 25 mg twice daily dosing could be increased to 50 mg twice daily depending on plasma concentrations of *omecamtiv mecarbil* after two weeks of treatment with the 25 mg dose.

In November 2015, we announced the results from the expansion phase of COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure) that were presented at American Heart Association in Orlando, Florida. Data from the expansion phase showed that dose titration controlled patient exposure to omecamtiv mecarbil. Approximately 60 percent of patients in the dose titration group escalated dosing to 50 mg twice daily. The study met its primary pharmacokinetics objective.

Following 20 weeks of treatment, statistically significant improvements were observed in pre-specified secondary endpoint measures of cardiac function in the dose titration group, compared to placebo. Systolic ejection time increased by 25.0 msec (p<0.001), stroke volume increased by 3.63 mL (p=0.022) and heart rate decreased by 2.97 beats per min (p=0.007). Left ventricular end-systolic and end-diastolic dimensions decreased by 1.79 mm (p=0.003) and 1.29 mm (p=0.013), respectively, and were associated with statistically significant reductions in left ventricular end-systolic and end-diastolic volumes. N-terminal pro-brain natriuretic peptide (NT-proBNP) decreased by 970 pg/mL (p=0.007). Additionally, in the 25 mg twice daily group, there were statistically significant increases in systolic ejection time and stroke volume and a decrease in NT-proBNP. All changes are from baseline compared to placebo. The pharmacodynamic effects of *omecamtiv mecarbil* were generally dose dependent and larger in patients that received oral dosing with 50 mg twice daily.

Adverse events (AEs), including serious AEs, in patients on *omecamtiv mecarbil* were comparable to placebo. The incidence of adjudicated deaths (2.7 percent died on placebo, 1.4 percent died on *omecamtiv mecarbil*), myocardial infarction (1.34 percent on placebo, 0.34 percent on *omecamtiv mecarbil*) and unstable angina (0 percent on placebo, 0.34 percent on *omecamtiv mecarbil*) was similar. Other cardiac AEs were generally balanced between placebo and active treatment groups. In the *omecamtiv mecarbil* groups, compared to placebo, cardiac troponin increased by 0.001 ng/mL and 0.006 ng/mL (median change from baseline at week 20) in the 25 mg twice daily group and dose titration group, respectively. Events of increased troponin (n=278 across all treatment groups) were independently adjudicated and none were determined to be myocardial ischemia or infarction.

ATOMIC-AHF. ATOMIC-AHF (Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure) was an international, randomized, double-blind, placebo-controlled, Phase 2b clinical trial of intravenous omecamtiv mecarbil in patients with left ventricular systolic dysfunction hospitalized with acutely decompensated heart failure, completed in 2013. ATOMIC-AHF was conducted by Amgen in collaboration with Cytokinetics. This clinical trial enrolled over 600 patients in three sequential, ascending-dose cohorts. In each cohort, patients were randomized to receive omecamtiv mecarbil or placebo. The primary efficacy objective of this trial was to evaluate the effect of 48 hours of intravenous omecamtiv mecarbil compared to placebo on dyspnea (shortness of breath). The secondary objectives were to assess the safety and tolerability of three dose levels of intravenous omecamtiv mecarbil compared with placebo and to evaluate the effects of 48 hours of treatment with intravenous omecamtiv mecarbil on additional measures of dyspnea, patients' global assessments, change in N-terminal pro brain-type natriuretic peptide (a biomarker associated with the severity of heart failure) and short-term clinical outcomes in these patients. In addition, the trial evaluated the relationship between plasma concentrations of omecamtiv mecarbil and echocardiographic parameters in patients with acute heart failure.

The primary efficacy endpoint of dyspnea symptom response was not met; however, the study demonstrated favorable trends between the dose and plasma concentration of *omecamtiv mecarbil* and dyspnea response. The incidence of worsening heart failure within seven days of initiating treatment appeared lower in each of the cohorts on *omecamtiv mecarbil* compared to the pooled placebo group of patients. Rates of adverse events (AEs), serious AEs, adjudicated deaths and hospitalizations were similar between *omecamtiv mecarbil* and placebo groups. Omecamtiv mecarbil was not associated with an increased incidence of tachyarrhythmias nor were heart rate or blood pressure adversely affected.

Prior Clinical Experience with Omecamtiv Mecarbil. Nine Phase 1 clinical trials of omecamtiv mecarbil have been conducted in healthy subjects: five conducted by Cytokinetics and four conducted by Amgen in collaboration with Cytokinetics. Cytokinetics has also conducted two Phase 2a clinical trials of omecamtiv

mecarbil. These clinical trials were designed to evaluate the safety, tolerability, pharmacodynamic and pharmacokinetic profiles of both intravenous and oral formulations in a diversity of patients, including patients with stable heart failure and patients with ischemic cardiomyopathy. In these trials, omecamtiv mecarbil exhibited generally linear, dose-proportional pharmacokinetics across the dose ranges studied. The adverse effects observed at intolerable doses in humans appeared similar to the adverse findings which occurred in preclinical safety studies at similar plasma concentrations. These effects are believed to be related to the mechanism of action of this drug candidate which, at intolerable doses, resulted in an excessive prolongation of the systolic ejection time (i.e., the time in which the heart is contracting). However, these effects resolved promptly with discontinuation of the infusions of omecamtiv mecarbil.

Ongoing Research in Cardiac Muscle Contractility. We agreed with Amgen to additional research activities conducted in 2014 and 2015 under the research plan directed to next-generation compounds in our cardiac muscle contractility program. We expect to continue our joint research program with Amgen in 2016. Under the Amgen Agreement, Amgen reimburses us for certain research activities we perform.

Background on Heart Failure Market. Heart failure is a widespread and debilitating syndrome affecting millions of people in the United States. The high and rapidly growing prevalence of heart failure translates into significant hospitalization rates and associated societal costs. About 6.4 million people in the United States have heart failure, resulting in nearly one million hospital discharges with the primary diagnosis of heart failure and approximately 300,000 deaths each year. For people over 65 years of age, heart failure incidences approach 10 per 1000 and approximately 50% of people diagnosed with heart failure will die within 5 years of diagnosis. These numbers are increasing due to the aging of the U.S. population and an increased likelihood of survival following acute myocardial infarctions. The costs to society attributable to the prevalence of heart failure are high, especially as many chronic heart failure patients suffer repeated acute episodes. Despite currently available therapies, readmission rates for heart failure patients remain high. In general, the mortality following hospitalization for patients with heart failure is 10.4% at 30 days, 22% at one year and 42.3% at 5 years, despite the availability of therapeutic alternatives for treatment of these patients. These poor outcomes in the setting of current therapies points to the need for novel therapeutics that may offer further reductions in morbidity and mortality. The annual cost of heart failure to the U.S. health care system is estimated to be $32 billion and is predicted to grow 120% to almost $70 billion by the year 2030. Today, a portion of that cost is attributable to drugs used to treat each of chronic and acute heart failure. Approximately 70% of those costs are due to hospitalization, home health and physician care. In the U.S., Medicare is one of the largest payors for heart failure related costs. Approximately 50% of Medicare beneficiaries with heart failure are concentrated in the top 20% of the hospital referral regions in the U.S, which generally include 5 to 10 hospitals in a geographic area. New drug therapies that could reduce the number of hospitalizations could decrease the cost to the health care system.

Beyond Muscle Contractility

We developed preclinical expertise in the mechanics of skeletal, cardiac and smooth muscle that extends from proteins to tissues to intact animal models. Our translational research in muscle contractility has enabled us to better understand the potential impact of small molecule compounds that increase skeletal or cardiac muscle contractility and to apply those findings to the further evaluation of our drug candidates in clinical populations. In addition to contractility, the other major functions of muscle include metabolism, growth and energetics, with each of these functions playing a role in certain diseases that could benefit from novel mechanism treatments. Accordingly, our knowledge of muscle contractility may serve as an entry point to the discovery of novel treatments for disorders involving muscle functions other than muscle contractility. We are leveraging our current understandings of muscle biology to investigate new ways of modulating these other aspects of muscle function for other potential therapeutic applications. For example, we are conducting research with compounds that affect muscle growth and that may have applications for serious diseases and medical conditions such as cachexia. Cachexia is a condition that can be associated with cancer, heart failure, chronic obstructive pulmonary disease or other conditions. This syndrome is characterized by the loss of muscle mass and may lead to weakness

and disability. We are performing research on compounds that may increase muscle mass and which may impact patient functionality or potentially alter the course of diseases associated with muscle wasting.

Intellectual Property

Our policy is to seek patent protection for the technologies, inventions and improvements that we develop that we consider important to the advancement of our business. As of December 31, 2015, we owned or controlled 91 issued U.S. patents and over 125 additional pending U.S. and foreign patent applications. We also rely on trade secrets, technical know-how and continuing innovation to develop and maintain our competitive position. Our commercial success will depend on obtaining and maintaining patent protection and trade secret protection for our drug candidates and technologies and our successfully defending these patents against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable patents cover them or we maintain them as trade secrets.

With regard to our drug candidates directed to muscle biology targets, we have a U.S. patent covering omecamtiv mecarbil and U.S. patents covering our skeletal muscle sarcomere activators including, but not limited to, tirasemtiv and CK-2127107, each of which will expire in 2027, 2027 and 2031, respectively, unless extended. We also have additional U.S. and foreign patent applications pending for each of our drug candidates. It is not known or determinable whether other patents will issue from any of our other pending applications or what the expiration dates would be for any other patents that do issue.

All of our drug candidates are still in clinical development and have not yet been approved by the FDA. If any of these drug candidates is approved, then pursuant to federal law, we may apply for an extension of the U.S. patent term for one patent covering the approved drug, which could extend the term of the applicable patent by up to a maximum of five additional years.

The degree of future protection of our proprietary rights is uncertain because legal means may not adequately protect our rights or permit us to gain or keep our competitive advantage. Due to evolving legal standards relating to the patentability, validity and enforceability of patents covering pharmaceutical inventions and the claim scope of these patents, our ability to enforce our existing patents and to obtain and enforce patents that may issue from any pending or future patent applications is uncertain and involves complex legal, scientific and factual questions. The standards that the U.S. Patent and Trademark Office and its foreign counterparts use to grant patents are not always applied predictably or uniformly and are subject to change. To date, no consistent policy has emerged regarding the breadth of claims allowed in biotechnology and pharmaceutical patents. Thus, we cannot be sure that any patents will issue from any pending or future patent applications owned by or licensed to us. Even if patents do issue, we cannot be sure that the claims of these patents will be held valid or enforceable by a court of law, will provide us with any significant protection against competitive products, or will afford us a commercial advantage over competitive products. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors might not have been the first to file patent applications for the inventions covered by our pending patent applications and issued patents;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- some or all of our or our licensors' pending patent applications may not result in issued patents or the claims that issue may be narrow in scope and not provide us with competitive advantages;
- our and our licensors' issued patents may not provide a basis for commercially viable drugs or therapies or may be challenged and invalidated by third parties;
- our or our licensors' patent applications or patents may be subject to interference, opposition or similar administrative proceedings that may result in a reduction in their scope or their loss altogether;

- we may not develop additional proprietary technologies or drug candidates that are patentable; or
- the patents of others may prevent us or our partners from discovering, developing or commercializing our drug candidates.

The defense and prosecution of intellectual property infringement suits, interferences, oppositions and related legal and administrative proceedings are costly, time-consuming to pursue and divert resources. The outcome of these types of proceedings is uncertain and could significantly harm our business.

Our ability to commercialize drugs depends on our ability to use, manufacture and sell those drugs without infringing the patents or other proprietary rights of third parties. U.S. and foreign issued patents and pending patent applications owned by third parties exist that may be relevant to the therapeutic areas and chemical compositions of our drug candidates. While we are aware of certain relevant patents and patent applications owned by third parties, there may be issued patents or pending applications of which we are not aware that could cover our drug candidates. Because patent applications are often not published immediately after filing, there may be currently pending applications, unknown to us, which could later result in issued patents that our activities with our drug candidates could infringe.

The development of our drug candidates and the commercialization of any resulting drugs may be impacted by patents of companies engaged in competitive programs with significantly greater resources. This could result in the expenditure of significant legal fees and management resources.

We also rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are often difficult to protect, especially outside of the United States. While we believe that we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, partners and other advisors may unintentionally or willfully disclose our trade secrets to competitors. Enforcing a claim that a third party illegally obtained and is using our trade secrets would be expensive and time-consuming, and the outcome would be unpredictable. Even if we are able to maintain our trade secrets as confidential, our competitors may independently develop information that is equivalent or similar to our trade secrets.

We seek to protect our intellectual property by requiring our employees, consultants, contractors and other advisors to execute nondisclosure and invention assignment agreements upon commencement of their employment or engagement, through which we seek to protect our intellectual property. Agreements with our employees also preclude them from bringing the proprietary information or materials of third parties to us. We also require confidentiality agreements or material transfer agreements from third parties that receive our confidential information or materials.

For further details on the risks relating to our intellectual property, please see the risk factors under Item 1A of this report, including, but not limited to, the risk factors entitled “Our success depends substantially upon our ability to obtain and maintain intellectual property protection relating to our drug candidates and research technologies” and “If we are sued for infringing third party intellectual property rights, it will be costly and time-consuming, and an unfavorable outcome would have a significant adverse effect on our business.”

Government Regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements upon the clinical development, manufacture, marketing and distribution of drugs. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, labeling, storage, record keeping, approval, advertising and promotion of our drug candidates and drugs.

In the United States, the FDA regulates drugs under the Federal Food, Drug and Cosmetic Act and implementing regulations. The process required by the FDA before our drug candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests, preclinical animal studies and formulation studies, all performed in accordance with the FDA's good laboratory practice regulations;
- submission to the FDA of an investigational new drug application ("IND"), which must become effective before clinical trials may begin;
- performance of adequate and well-controlled clinical trials to establish the safety and efficacy of the drug candidate for each proposed indication in accordance with good clinical practices;
- submission of a new drug application ("NDA") to the FDA, which must usually be accompanied by payment of a substantial user fee;
- satisfactory completion of an FDA preapproval inspection of the manufacturing facilities at which the product is produced to assess compliance with current good manufacturing practice ("cGMP") regulations and FDA audits of select clinical investigator sites to assess compliance with good clinical practices ("GCP"); and
- FDA review and approval of the NDA prior to any commercial marketing, sale or shipment of the drug.

Similar regulatory procedures generally apply in countries outside of the United States. This testing and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for our drug candidates will be granted on a timely basis, if at all.

Nonclinical tests include laboratory evaluation of product chemistry, formulation and stability, and studies to evaluate toxicity and pharmacokinetics in animals. The results of nonclinical tests, together with manufacturing information and analytical data, are submitted as part of an IND application to the FDA. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day period, raises concerns or questions about the conduct of the clinical trial, including concerns that human research subjects may be exposed to unreasonable health risks. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Our submission of an IND or a foreign equivalent, or those of our collaborators, may not result in authorization from the FDA or its foreign equivalent to commence a clinical trial. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development. Further, an independent institutional review board ("IRB") or its foreign equivalent for each medical center proposing to conduct the clinical trial must review and approve the plan for any clinical trial before it commences at that center and it must monitor the clinical trial until completed. The FDA, the IRB or their foreign equivalents, or the clinical trial sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

Clinical Trials. For purposes of an NDA or equivalent submission and approval, clinical trials are typically conducted in the following three sequential phases, which may overlap:

- *Phase 1:* Phase 1 includes the initial introduction of a drug candidate into humans. These studies may be conducted in patients, but are usually conducted in healthy volunteer subjects. These studies are designed to determine the metabolic and pharmacologic actions of the drug candidate in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. During Phase 1, sufficient information about the drug candidate's pharmacokinetics and pharmacological effects should be obtained to permit the design of well-controlled, scientifically valid, Phase 2 trials.
- *Phase 2:* Phase 2 includes the early controlled clinical studies conducted to obtain some preliminary data on the effectiveness of the drug candidate for a particular indication or indications in patients with the disease or condition. This phase of testing also helps determine the common short-term side effects and risks associated with the drug candidate. These clinical trials are generally conducted in a limited

patient population to identify possible adverse effects and safety risks, to make an initial determination of potential efficacy of the drug candidate for specific targeted indications and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials. Phase 2a clinical trials generally are designed to study the pharmacokinetic or pharmacodynamic properties and to conduct a preliminary assessment of safety of the drug candidate over a measured dose response range. In some cases, a sponsor may decide to conduct a Phase 2b clinical trial, which is a second, typically larger, confirmatory Phase 2 trial that could, if positive and accepted by a regulatory authority, support approval of a drug candidate.

- *Phase 3:* If the Phase 2 clinical trials demonstrate that a dose range of the drug candidate is potentially effective and has an acceptable safety profile, Phase 3 clinical trials are then undertaken in large patient populations to further evaluate dosage, to provide substantial evidence of clinical efficacy and to further test for safety in an expanded and diverse patient population at multiple, geographically dispersed clinical trial sites. Phase 3 trials are also intended to provide an adequate basis for extrapolating the results to the general population and transmitting that information in the drug labeling. Phase 3 studies usually include several hundred to several thousand people.

At any time during the conduct of a clinical trial, the FDA or a foreign equivalent can impose a clinical hold on the trial if it believes the trial is unsafe or that the protocol is clearly deficient in design in meeting its stated objectives, which requires the conduct of the trial to cease until the clinical hold is removed. In some cases, the FDA or foreign equivalent may condition approval of marketing approval for a drug candidate on the sponsor's agreement to conduct additional clinical trials to further assess the drug's safety and effectiveness after marketing approval, known as Phase 4 clinical trials.

The clinical trials we conduct for our drug candidates, both before and after approval, and the results of those trials, are generally required to be included in a clinical trials registry database that is available and accessible to the public via the internet. A failure by us to properly participate in the clinical trial database registry could subject us to significant civil monetary penalties.

Health care providers in the United States, including research institutions from which we or our partners obtain patient information, are subject to privacy rules under the Health Insurance Portability and Accountability Act of 1996 and state and local privacy laws. In the European Union, these entities are subject to the Directive 95/46-EC of the European Parliament on the protection of individuals with regard to the processing of personal data and individual European Union member states implementing additional legislation. Other countries have similar privacy legislation. We could face substantial penalties if we knowingly receive individually identifiable health information from a health care provider that has not satisfied the applicable privacy laws. In addition, certain privacy laws and genetic testing laws may apply directly to our operations and/or those of our partners and may impose restrictions on the use and dissemination of individuals' health information and use of biological samples.

New Drug/Marketing Approval Application. The results of drug candidate development, preclinical testing and clinical trials are submitted to the FDA as part of an NDA. The NDA also must contain extensive manufacturing information. In addition, the FDA may require that a proposed Risk Evaluation and Mitigation Strategy, also known as a REMS, be submitted as part of the NDA if the FDA determines that it is necessary to ensure that the benefits of the drug outweigh its risks. Similar, and in some cases additional, requirements apply in foreign jurisdictions for marketing approval applications for drugs in those jurisdictions. The FDA may refer the NDA to an advisory committee for review, evaluation and recommendation as to whether the application should be approved. The FDA often, but not always, follows the advisory committee's recommendations. The FDA may deny approval of an NDA by issuing a complete response letter if the applicable regulatory criteria are not satisfied, or it may require additional clinical data, including data in a pediatric population, or an additional Phase 3 clinical trial or impose other conditions that must be met in order to secure final approval for an NDA.

Even if such data are submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. Data from clinical trials are not always conclusive and the FDA may interpret data differently than we or our partners do. Once issued, the FDA or foreign equivalent may withdraw a drug approval if ongoing regulatory requirements are not met or if safety problems occur after the drug reaches the market. In addition, the FDA or its foreign counterparts may require further testing, including Phase 4 clinical trials, and surveillance or restrictive distribution programs to monitor the effect of approved drugs which have been commercialized. The FDA and its foreign counterparts have the power to prevent or limit further marketing of a drug based on the results of these post-marketing programs. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved label. Further, if there are any modifications to a drug, including changes in indications, labeling or manufacturing processes or facilities, we may be required to submit and obtain prior FDA approval of a new NDA or NDA supplement, or the foreign equivalent, which may require us to develop additional data or conduct additional preclinical studies and clinical trials.

Satisfaction of FDA regulations and requirements or similar requirements of state, local and foreign regulatory agencies typically takes several years. The actual time required may vary substantially based upon the type, complexity and novelty of the drug candidate or disease. Typically, if a drug candidate is intended to treat a chronic disease, as is the case with some of our drug candidates, safety and efficacy data must be gathered over an extended period of time. Government regulation may delay or prevent marketing of drug candidates for a considerable period of time and impose costly procedures upon our activities. The FDA or any other regulatory agency may not grant approvals for new indications for our drug candidates on a timely basis, if at all. Even if a drug candidate receives regulatory approval, the approval may be significantly limited to specific disease states, patient populations and dosages or restrictive distribution programs. Further, even after regulatory approval is obtained, later discovery of previously unknown problems with a drug may result in restrictions on the drug or even complete withdrawal of the drug from the market. Delays in obtaining, or failures to obtain, regulatory approvals for any of our drug candidates would harm our business. In addition, we cannot predict what future U.S. or foreign governmental regulations may be implemented.

Orphan Drug Designation. Some jurisdictions, including the United States, may designate drugs for relatively small patient populations as orphan drugs. The FDA grants orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States. For example, the FDA has granted tirasemtiv an orphan drug designation for the treatment of ALS. In addition, the European Medicines Agency has granted tirasemtiv orphan medicinal product status for the treatment of ALS.

An FDA orphan drug designation does not shorten the duration of the regulatory review and approval process. If a drug candidate that has an orphan drug designation receives the first FDA marketing approval for the indication for which the designation was granted, then the approved drug is entitled to orphan drug exclusivity. This means that the FDA may not approve another company's application to market the same drug for the same indication for a period of seven years, except in certain circumstances, such as a showing of clinical superiority to the drug with orphan exclusivity or if the holder of the orphan drug designation cannot assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the designation was granted. Competitors may receive approval of different drugs or biologics for the indications for which the orphan drug has exclusivity.

Fast Track Designation. Fast track is a process designed by the FDA to facilitate the development and expedite the review of drugs to treat serious diseases and fill an unmet medical need. Tirasemtiv has been granted fast track designation by the FDA for the treatment of ALS. Although fast track designation does not affect the standards for approval, the benefits of this designation include scheduled meetings to seek FDA input into development plans, the option of submitting an NDA in sections rather than all components simultaneously, and the potential eligibility for priority review if supported by clinical data.

Other Regulatory Requirements. Any drugs manufactured or distributed by us or our partners pursuant to FDA approvals or their foreign counterparts are subject to continuing regulation by the applicable regulatory

authority, including recordkeeping requirements and reporting of adverse experiences associated with the drug. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and other applicable regulatory authorities, and are subject to periodic unannounced inspections by these regulatory authorities for compliance with ongoing regulatory requirements, including cGMPs, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Failure to comply with the statutory and regulatory requirements can subject a manufacturer to possible legal or regulatory action, such as warning letters, suspension of manufacturing, seizure of product, injunctive action or possible civil penalties. We cannot be certain that we or our present or future third-party manufacturers or suppliers will be able to comply with the cGMP regulations and other ongoing FDA and other regulatory requirements. If our present or future third-party manufacturers or suppliers are not able to comply with these requirements, the FDA or its foreign counterparts may halt our or our partners' clinical trials, require us to recall a drug from distribution, or withdraw approval of the NDA for that drug.

For further details on the risks relating to government regulation of our business, please see the risk factors under Item 1A of this report, including, but not limited to, the risk factor entitled "The regulatory approval process is expensive, time-consuming and uncertain and may prevent our partners or us from obtaining approvals to commercialize some or all of our drug candidates."

Competition

We compete in the segments of the pharmaceutical, biotechnology and other related markets that address neuromuscular and cardiovascular diseases and other diseases relating to muscle dysfunction, each of which is highly competitive. We face significant competition from most pharmaceutical companies and biotechnology companies that are also researching and selling products designed to address cardiovascular diseases and diseases and medical conditions associated with skeletal muscle weakness and wasting. Many of our competitors have significantly greater financial, manufacturing, marketing and drug development resources than we do. Large pharmaceutical companies in particular have extensive experience in clinical testing and in obtaining regulatory approvals for drugs. These companies also have significantly greater research capabilities than we do. In addition, many universities and private and public research institutes are active in research of neuromuscular and cardiovascular diseases and other diseases where there is muscle dysfunction, some in direct competition with us.

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

- our drug candidates' efficacy, safety and tolerability;
- the speed and cost-effectiveness with which we develop our drug candidates;
- the selection of suitable indications for which to develop our drug candidates;
- the successful completion of clinical development and laboratory testing of our drug candidates;
- the timing and scope of any regulatory approvals we or our partners obtain for our drug candidates;
- our or our partners' ability to manufacture and sell commercial quantities of our approved drugs to meet market demand;
- acceptance of our drugs by physicians and other health care providers;
- the willingness of third party payors to provide reimbursement for the use of our drugs;
- our ability to protect our intellectual property and avoid infringing the intellectual property of others;
- the quality and breadth of our technology;
- our employees' skills and our ability to recruit and retain skilled employees;
- our cash flows under existing and potential future arrangements with licensees, partners and other parties; and
- the availability of substantial capital resources to fund development and commercialization activities.

Our competitors may develop drug candidates and market drugs that are less expensive and more effective than our future drugs or that may render our drugs obsolete. Our current or future competitors may also commercialize competing drugs before we or our partners can launch any drugs developed from our drug candidates. These organizations also compete with us to attract qualified personnel and potential parties for acquisitions, joint ventures or other strategic alliances.

If tirasemtiv is approved for marketing by the FDA or other regulatory authorities for the treatment of ALS, it may then compete with other potential new therapies for ALS that are currently being developed by companies such as Neuraltus Pharmaceuticals, Inc., Ionis Pharmaceuticals, Inc. (in collaboration with Biogen), Genervon Biopharmaceuticals, LLC, Orion Pharmaceuticals, Orphazyme, Mitsubishi Tanabe Pharma Corporation, Eisai Co., Ltd., and MediciNova, Inc. In addition, BrainStorm Cell Therapeutics and Neuralstem, Inc. are each conducting clinical development of stem cell therapies for the potential treatment of ALS.

If CK-2127107 is approved by the FDA or other regulatory authorities for the potential treatment of SMA, potential competitors include Roche (in collaboration with PTC Therapeutics), AveXis, Inc., Pfizer Inc., Ionis Pharmaceuticals, Inc. (in collaboration with Biogen), and Bioblast Pharma, Ltd. Drugs that could compete with CK-2127107 could also compete against tirasemtiv in ALS or other neuromuscular diseases, should the appropriate clinical trials be conducted. If CK-2127107 is approved by the FDA for the potential treatment of non-neuromuscular indications associated with muscle weakness, potential competitors include Ligand Pharmaceuticals, Inc., which is developing LGD-4033, a selective androgen receptor modulator, for muscle wasting; and GTx, Inc., which is developing ostarine, a selective androgen receptor modulator, for cancer cachexia and potentially other indications; Regeneron Pharmaceuticals, Inc. (in collaboration with Sanofi), which is developing SAR391786, a monoclonal antibody targeted to GDF8, for sarcopenia; Eli Lilly & Company, which is developing LY2495655, a monoclonal antibody targeted to myostatin, for muscular atrophy after hip arthroplasty; Acceleron Pharma, which is developing ACE-083 for diseases such as inclusion body myositis and certain forms of muscular dystrophy; Stealth Biotherapeutics, which is developing Bendavia for skeletal muscle disorders; Scholar Rock, which is developing SRK-015, a specific and local inhibitor of the activation of latent myostatin for the potential treatment of primary myopathies and Pfizer Inc., which is developing PF-06252616, a monoclonal antibody targeted to myostatin, in Duchenne muscular dystrophy. Novartis (in collaboration with Morphosys AG), is conducting clinical development with an activin type-IIB receptor antagonist, bimagrumab, to evaluate its ability to treat diseases involving the loss of muscle mass, strength and function.

If omecamtiv mecarbil is approved for marketing by the FDA or other regulatory authorities for the treatment of heart failure, it would compete against other drugs used for the treatment of acute and chronic heart failure. These include generic drugs, such as milrinone, dobutamine or digoxin and branded drugs such as Natrecor (nesiritide) Corlanor (ivabradine) and Entresto (LCZ696). Omecamtiv mecarbil could also potentially compete against other novel drug candidates and therapies in development, such as Gencaro (bucindolol), which is being developed by ARCA biopharma, Inc.; Reasanz (serelaxin) and Tekturna, which are being developed by Novartis; finerenone which is being developed by Bayer, cenderitide (CD-NP), which is being developed by Carpicor Therapeutics, Inc., TRV-027, which is being developed by Trevena; ularitide, which is being developed by Cardiorentis Ltd.; ONO-4232 which is being developed by Ono Pharmaceutical Company; JVS-100, a gene therapy being developed by Juventas Therapeutics; aladorian, which is being developed by ARMGO Pharma, Inc; TRV027, which is being developed by Trevena, Inc. in partnership with Forest Laboratories, Inc.; certain cardioprotectants which are being developed by Cardioxyl Pharmaceuticals, Inc.; Neurocardin, which is being developed by Zensun Sci & Tech, Ltd; and levosimendan, which was acquired for development by Tenax Therapeutics (formerly known as Oxygen Biotherapeutics, Inc.). In addition, there are a number of medical devices both marketed and in development for the potential treatment of heart failure.

For further details on the risks relating to our competitors, please see the risk factors under Item 1A of this report, including, but not limited to, the risk factor entitled “Our competitors may develop drugs that are less expensive, safer or more effective than ours, which may diminish or eliminate the commercial success of any drugs that we may commercialize.”

Employees

As of December 31, 2015, our workforce consisted of 100 full-time employees, 28 of whom hold Ph.D. or M.D. degrees, or both, and 22 of whom hold other advanced degrees. Of our total full-time employees, 68 are engaged in research and development and 32 are engaged in business and new product development, finance and administration functions

We have no collective bargaining agreements with our employees, and we have not experienced any work stoppages. We believe that our relations with our employees are good.

Investor Information

We file electronically with the SEC our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13 or 15(d) of the Exchange Act. The public may read or copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is www.sec.gov.

You may obtain a free copy of our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports on the day of filing with the SEC on our website at www.cytokinetics.com or by contacting the Investor Relations Department at our corporate offices by calling 650-624-3060. The information found on our website is not part of this or any other report filed with or furnished to the SEC.

Item 1A. ***Risk Factors***

In evaluating our business, you should carefully consider the following risks in addition to the other information in this report. Any of the following risks could materially and adversely affect our business, results of operations, financial condition or your investment in our securities, and many are beyond our control. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also adversely affect our business.

Risks Related To Our Business

We have a history of significant losses and may not achieve or sustain profitability and, as a result, you may lose all or part of your investment.

We have generally incurred operating losses in each year since our inception in 1997, due to costs incurred in connection with our research and development activities and general and administrative costs associated with our operations. Our drug candidates are all in early and mid-stage clinical testing, and we and our partners must conduct significant additional clinical trials before we and our partners can seek the regulatory approvals necessary to begin commercial sales of our drugs. We expect to incur increasing losses for at least several more years, as we continue our research activities and conduct development of, and seek regulatory approvals for, our drug candidates, and commercialize any approved drugs. If our drug candidates fail or do not gain regulatory approval, or if our drugs do not achieve market acceptance, we will not be profitable. If we fail to become and remain profitable, or if we are unable to fund our continuing losses, you could lose all or part of your investment.

We will need substantial additional capital in the future to sufficiently fund our operations.

We have consumed substantial amounts of capital to date, and our operating expenditures will increase over the next several years if we expand our research and development activities. We have funded all of our

operations and capital expenditures with proceeds from private and public sales of our equity securities, strategic alliances with Amgen, Astellas and others, long term debt, equipment financings, interest on investments, government grants and other grants. We believe that our existing cash and cash equivalents, short-term investments and interest earned on investments should be sufficient to meet our projected operating requirements for at least the next 12 months. 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. Because of the numerous risks and uncertainties associated with the development of our drug candidates and other research and development activities, including risks and uncertainties that could impact the rate of progress of our development activities, we are unable to estimate with certainty the amounts of capital outlays and operating expenditures associated with these activities.

For the foreseeable future, our operations will require significant additional funding, in large part due to our research and development expenses and the absence of any revenues from product sales. For example, we will require significant additional funding to enable us to conduct further development of tirasemtiv for the potential treatment of ALS, including any additional Phase 3 clinical trials that may be required by regulatory authorities to receive marketing approval for tirasemtiv. Until we can generate a sufficient amount of product revenue, we expect to raise future capital through strategic alliance and licensing arrangements, public or private equity offerings and debt financings. We do not currently have any commitments for future funding other than reimbursements, milestone and royalty payments that we may receive under our collaboration agreements with Amgen and Astellas. We may not receive any further funds under those agreements. Our ability to raise funds may be adversely impacted by current economic conditions. As a result of these and other factors, we do not know whether additional financing will be available when needed, or that, if available, such financing would be on terms favorable to our stockholders or us.

To the extent that we raise additional funds through strategic alliances or licensing and other arrangements with third parties, we will likely have to relinquish valuable rights to our technologies, research programs or drug candidates, or grant licenses on terms that may not be favorable to us. To the extent that we raise additional funds by issuing equity securities, our stockholders will experience additional dilution and our share price may decline. To the extent that we raise additional funds through debt financing, the financing may involve covenants that restrict our business activities. In addition, funding from any of these sources, if needed, may not be available to us on favorable terms, or at all, or in accordance with our planned timelines.

If we cannot raise the funds we need to operate our business, we will need to delay or discontinue certain research and development activities. For example, if we cannot raise the funds necessary to enable the conduct of further development for tirasemtiv for the potential treatment of ALS, our ability to continue the development of tirasemtiv will be delayed or suspended. If we delay or discontinue research and development activities, our stock price may be negatively affected.

Covenants in our loan and security agreement restrict our business and operations in many ways and if we do not effectively manage our covenants, our financial conditions and results of operations could be adversely affected. In addition, our operations may not provide sufficient revenue to meet the condition required in order to access the final loan available under the agreement and may also not provide sufficient cash to meet the repayment obligations of our debt incurred under the loan and security agreement.

Our loan and security agreement with Oxford Finance LLC and Silicon Valley Bank provides for up to $40.0 million in term loans due on October 1, 2020, of which $30.0 million in term loans has been borrowed to date. All of our current and future assets, except for intellectual property, are secured for our borrowings under the loan and security agreement. The loan and security agreement requires that we comply with certain covenants applicable to us, including among other things, covenants restricting dispositions, changes in business, management, ownership or business locations, mergers or acquisitions, indebtedness, encumbrances, distributions, investments, transactions with affiliates and subordinated debt, any of which could restrict our business and operations, particularly our ability to respond to changes in our business or to take specified actions

to take advantage of certain business opportunities that may be presented to us. Our failure to comply with any of the covenants could result in a default under the loan and security agreement, which could permit the lenders to declare all or part of any outstanding borrowings to be immediately due and payable, or to refuse to permit additional borrowings under the loan and security agreement. If we are unable to repay those amounts, the lenders under the loan and security agreement could proceed against the collateral granted to them to secure that debt, which would seriously harm our business. In addition, should we be unable to comply with these covenants or if we default on any portion of our outstanding borrowings, the lenders can also impose a 5.0% penalty and restrict access to additional borrowings under the loan and security agreement. Moreover, our ability to access any additional term loans under the loan and security agreement is subject to our ability to achieve a certain conditions, including certain clinical development milestones, which conditions we may not be able to meet and which and could adversely affect our liquidity. In addition, although we expect to borrow additional funds under the loan and security agreement, before we do so, we must first satisfy ourselves that we will have access to future alternate sources of capital, including cash flow from our own operations, equity capital markets or debt capital markets in order to repay any principal borrowed, which we may be unable to do, in which case, our liquidity and ability to fund our operations may be substantially impaired.

We have never generated, and may never generate, revenues from commercial sales of our drugs and we will not have drugs to market for at least several years, if ever.

We currently have no drugs for sale and we cannot guarantee that we will ever develop or obtain approval to market any drugs. To receive marketing approval for any drug candidate, we must demonstrate that the drug candidate satisfies rigorous standards of safety and efficacy to the FDA in the United States and other regulatory authorities abroad. We and our partners will need to conduct significant additional research and preclinical and clinical testing before we or our partners can file applications with the FDA or other regulatory authorities for approval of any of our drug candidates. In addition, to compete effectively, our drugs must be easy to use, cost-effective and economical to manufacture on a commercial scale, compared to other therapies available for the treatment of the same conditions. We may not achieve any of these objectives. Currently, our only drug candidates in clinical development are omecamtiv mecarbil for the potential treatment of heart failure, tirasemtiv for the potential treatment of ALS, and CK-2127107 for the potential treatment of SMA and potentially other neuromuscular and non-neuromuscular indications associated with muscle weakness. We cannot be certain that the clinical development of these or any future drug candidates will be successful, that they will receive the regulatory approvals required to commercialize them, that they will ultimately be accepted by prescribers or reimbursed by insurers or that any of our other research programs will yield a drug candidate suitable for clinical testing or commercialization. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially marketed for at least several years, if at all. The development of any one or all of these drug candidates may be discontinued at any stage of our clinical trials programs and we may not generate revenue from any of these drug candidates.

Clinical trials may fail to demonstrate the desired safety and efficacy of our drug candidates, which could prevent or significantly delay completion of clinical development and regulatory approval.

Prior to receiving approval to commercialize any of our drug candidates, we or our partners must adequately demonstrate to the satisfaction of FDA and foreign regulatory authorities that the drug candidate is sufficiently safe and effective with substantial evidence from well-controlled clinical trials. We or our partners will need to demonstrate efficacy in clinical trials for the treatment of specific indications and monitor safety throughout the clinical development process and following approval. None of our drug candidates have yet met the safety and efficacy standards required for regulatory approval for commercialization and they may never do so. In addition, for each of our preclinical compounds, we or our partners must adequately demonstrate satisfactory chemistry, formulation, stability and toxicity in order to submit an investigational new drug application ("IND") to the FDA, or an equivalent application in foreign jurisdictions, that would allow us to advance that compound into clinical trials. Furthermore, we or our partners may need to submit separate INDs (or foreign equivalent) to different divisions within the FDA (or foreign regulatory authorities) in order to pursue clinical trials in different therapeutic areas. Each new IND (or foreign equivalent) must be reviewed by the new division before the clinical

trial under its jurisdiction can proceed, entailing all the risks of delay inherent to regulatory review. If our or our partners' current or future preclinical studies or clinical trials are unsuccessful, our business will be significantly harmed and our stock price could be negatively affected.

All of our drug candidates are prone to the risks of failure inherent in drug development. Preclinical studies may not yield results that would adequately support the filing of an IND (or a foreign equivalent) with respect to our potential drug candidates. Even if the results of preclinical studies for a drug candidate are sufficient to support such a filing, the results of preclinical studies do not necessarily predict the results of clinical trials. As an example, because the physiology of animal species used in preclinical studies may vary substantially from other animal species and from humans, it may be difficult to assess with certainty whether a finding from a study in a particular animal species will result in similar findings in other animal species or in humans. For any of our drug candidates, the results from Phase 1 clinical trials in healthy volunteers and clinical results from Phase 1 and 2 trials in patients are not necessarily indicative of the results of later and larger clinical trials that are necessary to establish whether the drug candidate is safe and effective for the applicable indication. Likewise, interim results from a clinical trial may not be indicative of the final results from that trial, and results from early Phase 2 clinical trials may not be indicative of the results from later clinical trials. For example, early Phase 2 clinical trials of tirasemtiv in patients with ALS showed encouraging dose-related trends in measurements of the ALS Functional Rating Scale in its revised form (ALSFRS-R), a clinically validated instrument designed to measure disease progression and changes in functional status, for patients receiving tirasemtiv compared to those receiving placebo. However, BENEFIT-ALS, a Phase 2b clinical trial of tirasemtiv in patients with ALS, did not achieve its primary efficacy endpoint, the mean change from baseline in the ALSFRS-R for patients receiving tirasemtiv compared to those receiving placebo.

In addition, while the clinical trials of our drug candidates are designed based on the available relevant information, such information may not accurately predict what actually occurs during the course of the trial itself, which may have consequences for the conduct of an ongoing clinical trial or for the eventual results of that trial. For example, the number of patients planned to be enrolled in a placebo-controlled clinical trial is determined in part by estimates relating to expected treatment effect and variability about the primary endpoint. These estimates are based upon earlier nonclinical and clinical studies of the drug candidate itself and clinical trials of other drugs thought to have similar effects in a similar patient population. If information gained during the conduct of the trial shows these estimates to be inaccurate, we may elect to adjust the enrollment accordingly, which may cause delays in completing the trial, additional expense or a statistical penalty to apply to the evaluation of the trial results.

Furthermore, in view of the uncertainties inherent in drug development, such clinical trials may not be designed with focus on indications, patient populations, dosing regimens, endpoints, safety, efficacy or pharmacokinetic parameters or other variables that will provide the necessary safety or efficacy data to support regulatory approval to commercialize the resulting drugs. For example, we believe that effects on respiratory function, including slow vital capacity (SVC), may be appropriate as a clinical endpoint for tirasemtiv; however, regulatory authorities may not accept these effects as a clinical endpoint to support registration of tirasemtiv for the treatment of ALS. Clinical trials of our drug candidates are designed based on guidance or advice from regulatory agencies, which is subject to change during the development of the drug candidate at any time. Such a change in a regulatory agency's guidance or advice may cause that agency to deem results from trials to be insufficient to support approval of the drug candidate and require further clinical trials of that drug candidate to be conducted. In addition, individual patient responses to the dose administered of a drug may vary in a manner that is difficult to predict. Also, the methods we select to assess particular safety, efficacy or pharmacokinetic parameters may not yield the same statistical precision in estimating our drug candidates' effects as may other methodologies. Even if we believe the data collected from clinical trials of our drug candidates are promising, these data may not be sufficient to support approval by the FDA or foreign regulatory authorities. Non-clinical and clinical data can be interpreted in different ways. Accordingly, the FDA or foreign regulatory authorities could interpret these data in different ways from us or our partners, which could delay, limit or prevent regulatory approval.

Administering any of our drug candidates or potential drug candidates may produce undesirable side effects, also known as adverse events. Toxicities and adverse events observed in preclinical studies for some compounds in a particular research and development program may also occur in preclinical studies or clinical trials of other compounds from the same program. Potential toxicity issues may arise from the effects of the active pharmaceutical ingredient itself or from impurities or degradants that are present in the active pharmaceutical ingredient or could form over time in the formulated drug candidate or the active pharmaceutical ingredient. These toxicities or adverse events could delay or prevent the filing of an IND (or a foreign equivalent) with respect to our drug candidates or potential drug candidates or cause us, our partners or the FDA or foreign regulatory authorities to modify, suspend or terminate clinical trials with respect to any drug candidate at any time during the development program. Further, the administration of two or more drugs contemporaneously can lead to interactions between them, and our drug candidates may interact with other drugs that trial subjects are taking. For example, co-administration of tirasemtiv and riluzole (an approved treatment for ALS) approximately doubles the average maximum riluzole plasma level. If the adverse events are severe or frequent enough to outweigh the potential efficacy of a drug candidate, the FDA or other regulatory authorities could deny approval of that drug candidate for any or all targeted indications. Even if one or more of our drug candidates were approved for sale as drugs, the occurrence of even a limited number of toxicities or adverse events when used in large populations may cause the FDA or foreign regulatory authorities to impose restrictions on, or stop, the further marketing of those drugs. Indications of potential adverse events or toxicities which do not seem significant during the course of clinical trials may later turn out to actually constitute serious adverse events or toxicities when a drug is used in large populations or for extended periods of time.

We have observed certain adverse events in the clinical trials conducted with our drug candidates. For example, in BENEFIT-ALS, adverse events of dizziness, fatigue, nausea, confusional state, muscle spasms, somnolence (sleepiness), decreased appetite, headache, insomnia, dyspnea (difficulty breathing) and dysathria (difficulty speaking) occurred more frequently during treatment with tirasemtiv than with placebo. In addition, weight loss was significantly greater in patients with gastrointestinal adverse events (e.g., nausea and decreased appetite), which occurred more frequently on tirasemtiv than on placebo. In clinical trials of omecamtiv mecarbil, adverse events of chest discomfort, palpitations, dizziness and feeling hot, increases in heart rate, declines in blood pressure, electrocardiographic changes consistent with acute myocardial ischemia and transient rises in the MB fraction of creatine kinase and cardiac troponins I and T, which are indicative of myocardial infarction were observed during treatment with omecamtiv mecarbil.

In addition, clinical trials of tirasemtiv and omecamtiv mecarbil enroll patients who typically suffer from serious diseases which put them at increased risk of death. These patients may die while receiving our drug candidates. In such circumstances, it may not be possible to exclude with certainty a causal relationship to our drug candidate, even though the responsible clinical investigator may view such an event as not study drug-related.

Any failure or significant delay in completing preclinical studies or clinical trials for our drug candidates, or in receiving and maintaining regulatory approval for the sale of any resulting drugs, may significantly harm our business and negatively affect our stock price.

The failure of a number of Phase 3 clinical trials evaluating other compounds as potential treatments for patients with ALS may suggest an increased risk that our planned Phase 3 clinical development program of tirasemtiv in patients with ALS will also fail.

The FDA has not approved any drug for the treatment of ALS since its approval of riluzole in 1995. In recent years, a number of Phase 3 clinical trials of potential treatments for ALS have failed to demonstrate the requisite efficacy for approval or for their continued development. These include Biogen Idec's trial of dexpramipexole, known as EMPOWER, the National Institute of Neurological Disorders and Stroke's trial of ceftriaxone, and Trophos SA's trial of olesoxime. Tirasemtiv, like these compounds, may fail in Phase 3 clinical development if it does not show a statistically significant level of clinical efficacy or if the adverse event profile

is too great compared to it benefits. Further, even if we believe the data collected from our planned Phase 3 clinical development program of tirasemtiv are promising and should support approval, the FDA or other regulatory authorities may not deem these data to be sufficient to support approval.

We have never before conducted a Phase 3 clinical trial nor submitted an application for marketing authorization to regulatory authorities, and may be unable to do so for tirasemtiv or any other drug candidates we are developing.

We are conducting VITALITY-ALS, a Phase 3 clinical trial, designed to assess the effects of tirasemtiv versus placebo on slow vital capacity ("SVC") and other measure of respiratory function in patients with ALS. Conducting Phase 3 clinical trials and submitting a successful application for marketing authorization is complex, time consuming and expensive. We have not previously conducted a Phase 3 clinical trial and have limited experience in preparing, submitting and prosecuting a marketing authorization. Consequently, we may be unable to effectively and efficiently execute and complete the trial in a manner that leads to the submission to and approval by regulatory authorities of a marketing application for tirasemtiv. We may require more time and incur greater costs than our competitors and may not succeed in obtaining regulatory approvals of products that we develop. Failure to commence or complete, or delays in, our planned clinical trials, would prevent us from or delay us in commercializing tirasemtiv, and other product candidates we are developing.

Neither the FDA nor European regulatory authorities has accepted the primary endpoint in our Phase 3 clinical trial in patients with ALS (a statistically significant reduction in the decline in SVC) as a sufficient measure of clinical significance alone to support regulatory approval of tirasemtiv for the treatment of ALS.

To commercialize tirasemtiv, we must first demonstrate to the satisfaction of the FDA or foreign regulatory authorities that tirasemtiv is sufficiently safe and effective. To date, neither the FDA nor European regulatory authorities has indicated that the primary end point that we have specified in our Phase 3 clinical trial in patients with ALS (change from baseline to 24 weeks in SVC) is, in and of itself, a sufficient measure of clinical significance to establish the efficacy of tirasemtiv. Our Phase 3 clinical trial will also be measuring secondary endpoints of respiratory function and patient condition to provide further evidence of the potential clinical significance of a treatment effect. However, there is no assurance as to which of these secondary endpoints (if any) will be affected even if treatment with tirasemtiv achieves the primary efficacy objective of the trial. Further, there is no assurance as to whether regulatory authorities would accept the outcome of the trial as being a sufficient demonstration of clinical efficacy even if the primary endpoint and all secondary endpoints are achieved. We will continue interactions with regulatory authorities regarding the appropriate assessment(s) of the clinical meaningfulness and potential efficacy of therapy in the ALS population. If the results of our Phase 3 clinical trial in ALS are not sufficient to persuade regulatory authorities of the safety and efficacy of tirasemtiv, either because of a failure to achieve pre-specified endpoints or because the authorities do not accept such endpoints as being sufficient, then we would be required to conduct successfully one or more additional Phase 3 clinical trials, prior to receiving marketing authorization, which would be expensive, time consuming and uncertain.

It is not known whether the FDA or other regulatory authorities would accept a single Phase 3 clinical trial as being adequate to support marketing approval of tirasemtiv, even if the results of such trial are positive.

The conventional standard for granting marketing authorization of a new investigational medicine is the demonstration of safety and efficacy in two large, well-controlled Phase 3 clinical trials. The Phase 3 trial of tirasemtiv in ALS that we are currently conducting will be the first Phase 3 trial of this drug candidate. In the case of diseases with high unmet medical need, such as ALS, regulatory authorities may exercise their discretion to approve a new pharmaceutical on the basis of a single outcomes trial (sometimes subject to the conduct of subsequent confirmatory trial(s)). However, this is always within the judgment of the regulatory authorities and is dependent on their assessment of the degree of success achieved in the clinical trial as balanced by the potential risks associated with treatment. Even if our first Phase 3 trial of tirasemtiv shows positive results,

regulatory authorities may require us to successfully conduct one or more additional Phase 3 clinical trials prior to receiving marketing authorization, which would be expensive, time consuming and uncertain.

Clinical trials are expensive, time-consuming and subject to delay.

Clinical trials are subject to rigorous regulatory requirements and are very expensive, difficult and time-consuming to design and implement. The length of time and number of trial sites and patients required for clinical trials vary substantially based on the type, complexity, novelty, intended use of the drug candidate and safety concerns. We estimate that the clinical trials of our current drug candidates will each continue for several more years. However, the clinical trials for all or any of our drug candidates may take significantly longer to complete. The commencement and completion of our or our partners' clinical trials could be delayed or prevented by many factors, including, but not limited to:

- delays in obtaining, or inability to obtain, regulatory or other approvals to commence and conduct clinical trials in the manner we or our partners deem necessary for the appropriate and timely development of our drug candidates and commercialization of any resulting drugs;
- delays in identifying and reaching agreement, or inability to identify and reach agreement, on acceptable terms, with prospective clinical trial sites and other entities involved in the conduct of our or our partners' clinical trials;
- delays or additional costs in developing, or inability to develop, appropriate formulations of our drug candidates for clinical trial use, including an appropriate modified release oral formulation for omecamtiv mecarbil;
- slower than expected rates of patient recruitment and enrollment, including as a result of competition for patients with other clinical trials; limited numbers of patients that meet the enrollment criteria; patients', investigators' or trial sites' reluctance to agree to the requirements of a protocol; or the introduction of alternative therapies or drugs by others;
- for those drug candidates that are the subject of a strategic alliance, delays in reaching agreement with our partner as to appropriate development strategies;
- a regulatory authority may require changes to a protocol for a clinical trial that then may require approval from regulatory agencies in other jurisdictions where the trial is being conducted;
- an institutional review board ("IRB") or its foreign equivalent may require changes to a protocol that then require approval from regulatory agencies and other IRBs and their foreign equivalents, or regulatory authorities may require changes to a protocol that then require approval from the IRBs or their foreign equivalents;
- for clinical trials conducted in foreign countries, the time and resources required to identify, interpret and comply with foreign regulatory requirements or changes in those requirements, and political instability or natural disasters occurring in those countries;
- lack of effectiveness of our drug candidates during clinical trials;
- unforeseen safety issues;
- inadequate supply, or delays in the manufacture or supply, of clinical trial materials;
- uncertain dosing issues;
- failure by us, our partners, or clinical research organizations, investigators or site personnel engaged by us or our partners to comply with good clinical practices and other applicable laws and regulations, including those concerning informed consent;
- inability or unwillingness of investigators or their staffs to follow clinical protocols;
- failure by our clinical research organizations, clinical manufacturing organizations and other third parties supporting our or our partners' clinical trials to fulfill their obligations;

- inability to monitor patients adequately during or after treatment;
- introduction of new therapies or changes in standards of practice or regulatory guidance that render our drug candidates or their clinical trial endpoints obsolete; and
- results from non-clinical studies that may adversely impact the timing or further development of our drug candidates.

We do not know whether planned clinical trials will begin on time, or whether planned or currently ongoing clinical trials will need to be restructured or will be completed on schedule, if at all. Significant delays in clinical trials will impede our ability to commercialize our drug candidates and generate revenue and could significantly increase our development costs.

We depend on Amgen for the conduct and funding of the development and commercialization of omecamtiv mecarbil.

Under our strategic alliance, Amgen holds an exclusive license to our drug candidate omecamtiv mecarbil worldwide. As a result, Amgen is responsible for the development and obtaining and maintaining regulatory approval of omecamtiv mecarbil for the potential treatment of heart failure worldwide.

We do not control the development activities being conducted or that may be conducted in the future by Amgen, including, but not limited to, the timing of initiation, termination or completion of clinical trials, the analysis of data arising out of those clinical trials or the timing of release of data concerning those clinical trials, which may impact our ability to report on Amgen's results. Amgen may conduct these activities more slowly or in a different manner than we would if we controlled the development of omecamtiv mecarbil. Amgen is responsible for filing future applications with the FDA or other regulatory authorities for approval of omecamtiv mecarbil and will be the owner of any marketing approvals issued by the FDA or other regulatory authorities for omecamtiv mecarbil. If the FDA or other regulatory authorities approve omecamtiv mecarbil, Amgen will also be responsible for the marketing and sale of the resulting drug, subject to our right to co-promote omecamtiv mecarbil in North America if we exercise our option to co-fund Phase 3 development costs of omecamtiv mecarbil under the collaboration. However, we cannot control whether Amgen will devote sufficient attention and resources to the development of omecamtiv mecarbil or will proceed in an expeditious manner, even if we do exercise our option to co-fund the development of omecamtiv mecarbil. Even if the FDA or other regulatory agencies approve omecamtiv mecarbil, Amgen may elect not to proceed with the commercialization of the resulting drug in one or more countries.

If the results of one or more clinical trials with omecamtiv mecarbil do not meet Amgen's expectations at any time, Amgen may elect to terminate further development of omecamtiv mecarbil or certain of the potential clinical trials for omecamtiv mecarbil, even if the actual number of patients treated at that time is relatively small. In addition, Amgen generally has discretion to elect whether to pursue or abandon the development of omecamtiv mecarbil and may terminate our strategic alliance for any reason upon six months prior notice. If Amgen abandons omecamtiv mecarbil, it would result in a delay in or could prevent us from commercializing omecamtiv mecarbil, and would delay and could prevent us from obtaining revenues for this drug candidate. Disputes may arise between us and Amgen, which may delay or cause the termination of any omecamtiv mecarbil clinical trials, result in significant litigation or cause Amgen to act in a manner that is not in our best interest. If development of omecamtiv mecarbil does not progress for these or any other reasons, we would not receive further milestone payments or royalties on product sales from Amgen with respect to omecamtiv mecarbil. If Amgen abandons development of omecamtiv mecarbil prior to regulatory approval or if it elects not to proceed with commercialization of the resulting drug following regulatory approval, we would have to seek a new partner for development or commercialization, curtail or abandon that development or commercialization, or undertake and fund the development of omecamtiv mecarbil or commercialization of the resulting drug ourselves. If we seek a new partner but are unable to do so on acceptable terms, or at all, or do not have sufficient funds to conduct the development or commercialization of omecamtiv mecarbil ourselves, we would have to curtail or abandon that development or commercialization, which could harm our business.

We depend on Astellas for the conduct and funding of the development and commercialization of CK-2127107.

In December 2014, we expanded our strategic alliance with Astellas focused on the research, development and commercialization of skeletal muscle activators, other than tirasemtiv and certain related compounds. The primary objective of the strategic alliance is to advance novel therapies for indications associated with muscle weakness.

Under this strategic alliance, we have granted Astellas an exclusive license to co-develop and commercialize CK-2127107 for potential application in spinal muscular atrophy (SMA) and potentially other indications worldwide. We have initiated a Phase 2 clinical trial of CK-2127107 in patients with SMA. Unless otherwise agreed by the parties, Astellas will be primarily responsible for the conduct of subsequent development and commercialization activities for CK-2127107.

We do not control the development activities that may be conducted by Astellas, including, but not limited to, the timing of initiation, termination or completion of clinical trials, the analysis of data arising out of those clinical trials or the timing of release of data concerning those clinical trials, which may impact our ability to report on Astellas' results. Astellas may conduct these activities more slowly or in a different manner than we would. In general, Astellas is responsible for filing future applications with the FDA or other regulatory authorities for approval of CK-2127107 and will be the owner of any marketing approvals issued by the FDA or other regulatory authorities for CK-2127107. If the FDA or other regulatory authorities approve CK-2127107, Astellas will also be responsible for the marketing and sale of the resulting drug, subject to our right to co-promote the drug in the United States, Canada and, for neuromuscular indications, Europe. However, we cannot control whether Astellas will devote sufficient attention and resources to the development of CK-2127107 or will proceed in an expeditious manner. Even if the FDA or other regulatory agencies approve CK-2127107, Astellas may elect not to proceed with the commercialization of the resulting drug in one or more countries.

If the results of one or more clinical trials with CK-2127107 do not meet Astellas' expectations at any time, Astellas may elect to terminate further development of CK-2127107 or certain of the potential clinical trials for CK-2127107, even if the actual number of patients treated at that time is relatively small. In addition, Astellas generally has discretion to elect whether to pursue or abandon the development of CK-2127107. Astellas may terminate our strategic alliance in whole or in part for any reason upon six months prior notice at any time following expiration of the strategic alliance's research term, which will expire December 31, 2016. If Astellas abandons CK-2127107, it would result in a delay in or could prevent us from further developing or commercializing CK-2127107, and would delay and could prevent us from obtaining revenues for this drug candidate. Disputes may arise between us and Astellas, which may delay or cause the termination of any CK-2127107 clinical trials, result in significant litigation or cause Astellas to act in a manner that is not in our best interest. If development of CK-2127107 does not progress for these or any other reasons, we would not receive further milestone payments or royalties on product sales from Astellas with respect to CK-2127107. If Astellas abandons development of CK-2127107 prior to regulatory approval or if it elects not to proceed with commercialization of the resulting drug following regulatory approval, we would have to seek a new partner for development or commercialization, curtail or abandon that development or commercialization, or undertake and fund the development of CK-2127107 or commercialization of the resulting drug ourselves. If we seek a new partner but are unable to do so on acceptable terms, or at all, or do not have sufficient funds to conduct the development or commercialization of CK-2127107 ourselves, we would have to curtail or abandon that development or commercialization, which could harm our business.

If we do not enter into strategic alliances for our unpartnered drug candidates or research and development programs or fail to successfully maintain our current or future strategic alliances, we may have to reduce, delay or discontinue our advancement of our drug candidates and programs or expand our research and development capabilities and increase our expenditures.

Drug development is complicated and expensive. We currently have limited financial and operational resources to carry out drug development. Our strategy for developing, manufacturing and commercializing our

drug candidates currently requires us to enter into and successfully maintain strategic alliances with pharmaceutical companies or other industry participants to advance our programs and reduce our expenditures on each program. Accordingly, the success of our development activities depends in large part on our current and future strategic partners' performance, over which we have little or no control.

We have retained exclusive rights to develop and commercialize tirasemtiv. We currently do not have a strategic partner for this drug candidate. We may seek one or more strategic partners or other arrangements with third parties to support further clinical development and commercialization of tirasemtiv. However, we may not be able to negotiate and enter into such strategic alliances or arrangements on acceptable terms, if at all, or in accordance with our planned timelines. If we are unable to enter into a strategic alliance for tirasemtiv, we will be unable to conduct further clinical development of tirasemtiv for the potential treatment of ALS unless we are able to acquire the funding to do so from another source.

Our ability to commercialize drugs that we develop with our partners and that generate royalties from product sales depends on our partners' abilities to assist us in establishing the safety and efficacy of our drug candidates, obtaining and maintaining regulatory approvals and achieving market acceptance of the drugs once commercialized. Our partners may elect to delay or terminate development of one or more drug candidates, independently develop drugs that could compete with ours or fail to commit sufficient resources to the marketing and distribution of drugs developed through their strategic alliances with us. Our partners may not proceed with the development and commercialization of our drug candidates with the same degree of urgency as we would because of other priorities they face. In addition, new business combinations or changes in a partner's business strategy may adversely affect its willingness or ability to carry out its obligations under a strategic alliance.

If we are not able to successfully maintain our existing strategic alliances or establish and successfully maintain additional strategic alliances, we will have to limit the size or scope of, or delay or discontinue, one or more of our drug development programs or research programs, or undertake and fund these programs ourselves. Alternatively, if we elect to continue to conduct any of these drug development programs or research programs on our own, we will need to expand our capability to conduct clinical development by bringing additional skills, technical expertise and resources into our organization. This would require significant additional funding, which may not be available to us on acceptable terms, or at all.

To the extent we elect to fund the development of a drug candidate, such as omecamtiv mecarbil, tirasemtiv or CK-2127107, or the commercialization of a drug at our expense, we will need substantial additional funding.

The discovery, development and commercialization of new drugs is costly. As a result, to the extent we elect to fund the development of a drug candidate, such as omecamtiv mecarbil, tirasemtiv or CK-2127107, or the commercialization of a drug, we will need to raise additional capital to:

- fund clinical trials and seek regulatory approvals;
- expand our development capabilities;
- engage third party manufacturers for such drug candidate or drug;
- build or access commercialization capabilities;
- implement additional internal systems and infrastructure;
- maintain, defend and expand the scope of our intellectual property; and
- hire and support additional management and scientific personnel.

Our future funding requirements will depend on many factors, including, but not limited to:

- the rate of progress and costs of our or our partners' clinical trials and other research and development activities;

- the costs and timing of seeking and obtaining regulatory approvals;
- the costs associated with establishing manufacturing and commercialization capabilities;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- the costs of acquiring or investing in businesses, products and technologies;
- the effect of competing technological and market developments; and
- the status of, payment and other terms, and timing of any strategic alliance, licensing or other arrangements that we have entered into or may establish.

Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may never do, we expect to continue to finance our future cash needs primarily through strategic alliances, public or private equity offerings and debt financings. We cannot be certain that additional funding will be available on acceptable terms, or at all. If we are not able to secure additional funding when needed, we may have to delay, reduce the scope of or eliminate one or more of our clinical trials or research and development programs or future commercialization initiatives.

We depend on contract research organizations to conduct our clinical trials and have limited control over their performance.

We have used and intend to continue to use contract research organizations ("CROs") within and outside of the United States to conduct clinical trials of our drug candidates, such as tirasemtiv, CK-2127107 and omecamtiv mecarbil, and related activities. We do not have control over many aspects of our CROs' activities, and cannot fully control the amount, timing or quality of resources that they devote to our programs. CROs may not assign as high a priority to our programs or pursue them as diligently as we would if we were undertaking these programs ourselves. The activities conducted by our CROs therefore may not be completed on schedule or in a satisfactory manner. CROs may also give higher priority to relationships with our competitors and potential competitors than to their relationships with us. Outside of the United States, we are particularly dependent on our CROs' expertise in communicating with clinical trial sites and regulatory authorities and ensuring that our clinical trials and related activities and regulatory filings comply with applicable laws.

Our CROs' failure to carry out development activities on our behalf as agreed and in accordance with our and the FDA's or other regulatory agencies' requirements and applicable U.S. and foreign laws, or our failure to properly coordinate and manage these activities, could increase the cost of our operations and delay or prevent the development, approval and commercialization of our drug candidates. For example, in June 2013, we learned from our data management vendor for our BENEFIT-ALS clinical trial that a programming error in the electronic data capture system controlling study drug assignment caused 58 patients initially randomized to and treated with tirasemtiv to receive placebo instead at a certain trial visit and for the remainder of the trial. In order to maintain the originally intended statistical power of the trial, we amended the protocol to permit enrollment of approximately 680 patients, or 180 patients in addition to the 500 patients allowed under the existing protocol. This protocol amendment resulted in additional costs and delays in conducting BENEFIT-ALS. In addition, if a CRO fails to perform as agreed, our ability to collect damages may be contractually limited. If we fail to effectively manage the CROs carrying out the development of our drug candidates or if our CROs fail to perform as agreed, the commercialization of our drug candidates will be delayed or prevented.

We have no manufacturing capacity and depend on our strategic partners and contract manufacturers to produce our clinical trial materials, including our drug candidates, and anticipate continued reliance on contract manufacturers for the development and commercialization of our potential drugs.

We do not currently operate manufacturing facilities for clinical or commercial production of our drug candidates. We have limited experience in drug formulation and manufacturing, and we lack the resources and

the capabilities to manufacture any of our drug candidates on a clinical or commercial scale. Amgen has assumed responsibility to conduct these activities for the ongoing development of omecamtiv mecarbil worldwide. Following our conduct of the early development of CK-2127107, including the ongoing Phase 2 clinical trial in patients with SMA, Astellas will assume primary responsibility to conduct the manufacturing for the ongoing development of CK-2127107 worldwide. For tirasemtiv, we rely on a limited number of contract manufacturers. In particular, we rely on single-source contract manufacturers for the active pharmaceutical ingredient and the drug product supply for our clinical trials, as well as other materials required to conduct our clinical trials. We expect to rely on contract manufacturers to supply all future drug candidates for which we conduct development, as well as other materials required to conduct our clinical trials. If any of our existing or future contract manufacturers fail to perform satisfactorily, it could delay development or regulatory approval of our drug candidates or commercialization of our drugs, producing additional losses and depriving us of potential product revenues. In addition, if a contract manufacturer fails to perform as agreed, our ability to collect damages may be contractually limited.

Our drug candidates require precise high-quality manufacturing. The failure to achieve and maintain high manufacturing standards, including failure to detect or control anticipated or unanticipated manufacturing errors or the frequent occurrence of such errors, could result in patient injury or death, discontinuance or delay of ongoing or planned clinical trials, delays or failures in product testing or delivery, cost overruns, product recalls or withdrawals and other problems that could seriously hurt our business. Contract drug manufacturers often encounter difficulties involving production yields, quality control and quality assurance and shortages of qualified personnel. These manufacturers are subject to stringent regulatory requirements, including the FDA's current good manufacturing practices regulations and similar foreign laws and standards. Each contract manufacturer must pass a pre-approval inspection before we can obtain marketing approval for any of our drug candidates and following approval will be subject to ongoing periodic unannounced inspections by the FDA, the U.S. Drug Enforcement Agency and other regulatory agencies, to ensure strict compliance with current good manufacturing practices and other applicable government regulations and corresponding foreign laws and standards. We seek to ensure that our contract manufacturers comply fully with all applicable regulations, laws and standards. However, we do not have control over our contract manufacturers' compliance with these regulations, laws and standards. If one of our contract manufacturers fails to pass its pre-approval inspection or maintain ongoing compliance at any time, the production of our drug candidates could be interrupted, resulting in delays or discontinuance of our clinical trials, additional costs and potentially lost revenues. In addition, failure of any third party manufacturers or us to comply with applicable regulations, including pre-or post-approval inspections and the current good manufacturing practice requirements of the FDA or other comparable regulatory agencies, could result in sanctions being imposed on us. These sanctions could include fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our products, delay, suspension or withdrawal of approvals, license revocation, product seizures or recalls, operational restrictions and criminal prosecutions, any of which could significantly and adversely affect our business.

In addition, our existing and future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to successfully produce, store and distribute our drug candidates. If a natural disaster, business failure, strike or other difficulty occurs, we may be unable to replace these contract manufacturers in a timely or cost-effective manner and the production of our drug candidates would be interrupted, resulting in delays and additional costs.

Switching manufacturers or manufacturing sites would be difficult and time-consuming because the number of potential manufacturers is limited. In addition, before a drug from any replacement manufacturer or manufacturing site can be commercialized, the FDA and, in some cases, foreign regulatory agencies, must approve that site. These approvals would require regulatory testing and compliance inspections. A new manufacturer or manufacturing site also would have to be educated in, or develop substantially equivalent processes for, production of our drugs and drug candidates. It may be difficult or impossible to transfer certain elements of a manufacturing process to a new manufacturer or for us to find a replacement manufacturer on

acceptable terms quickly, or at all, either of which would delay or prevent our ability to develop drug candidates and commercialize any resulting drugs.

We may not be able to successfully scale-up manufacturing of our drug candidates in sufficient quality and quantity, which would delay or prevent us from developing our drug candidates and commercializing resulting approved drugs, if any.

To date, our drug candidates have been manufactured in small quantities for preclinical studies and early and mid-stage clinical trials. In order to conduct larger scale or late-stage clinical trials for a drug candidate and for commercialization of the resulting drug if that drug candidate is approved for sale, we will need to manufacture it in larger quantities. We may not be able to successfully increase the manufacturing capacity for any of our drug candidates, whether in collaboration with third-party manufacturers or on our own, in a timely or cost-effective manner or at all. If a contract manufacturer makes improvements in the manufacturing process for our drug candidates, we may not own, or may have to share, the intellectual property rights to those improvements. Significant scale-up of manufacturing may require additional validation studies, which are costly and which regulatory authorities must review and approve. In addition, quality issues may arise during those scale-up activities because of the inherent properties of a drug candidate itself or of a drug candidate in combination with other components added during the manufacturing and packaging process, or during shipping and storage of the finished product or active pharmaceutical ingredients. If we are unable to successfully scale-up manufacture of any of our drug candidates in sufficient quality and quantity, the development of that drug candidate and regulatory approval or commercial launch for any resulting drugs may be delayed or there may be a shortage in supply, which could significantly harm our business. In addition, data demonstrating the stability of both drug substance and drug product, using the commercial manufacturing process and at commercial scale, are required for marketing applications. Failure to produce drug substance and drug products in a timely manner and obtain stability data could result in delay of submission of marketing applications.

The mechanisms of action of our drug candidates are unproven, and we do not know whether we will be able to develop any drug of commercial value.

We have discovered and are currently developing drug candidates that have what we believe are novel mechanisms of action directed against cytoskeletal targets, and intend to continue to do so. Because no currently approved drugs appear to operate via the same biochemical mechanisms as our compounds, we cannot be certain that our drug candidates will result in commercially viable drugs that safely and effectively treat the indications for which we intend to develop them. The results we have seen for our compounds in preclinical models may not translate into similar results in humans, and results of early clinical trials in humans may not be predictive of the results of larger clinical trials that may later be conducted with our drug candidates. Even if we are successful in developing and receiving regulatory approval for a drug candidate for the treatment of a particular disease, we cannot be certain that it will be accepted by prescribers or be reimbursed by insurers or that we will also be able to develop and receive regulatory approval for that or other drug candidates for the treatment of other diseases. If we or our partners are unable to successfully develop and commercialize our drug candidates, our business will be materially harmed.

Our success depends substantially upon our ability to obtain and maintain intellectual property protection relating to our drug candidates, compounds and research technologies.

We own, or hold exclusive licenses to, a number of U.S. and foreign patents and patent applications directed to our drug candidates, compounds and research technologies. Our success depends on our ability to obtain patent protection both in the United States and in other countries for our drug candidates, their methods of manufacture and use, and our technologies. Our ability to protect our drug candidates, compounds and technologies from unauthorized or infringing use by third parties depends substantially on our ability to obtain and enforce our patents. If our issued patents and patent applications, if granted, do not adequately describe, enable or otherwise provide coverage of our technologies and drug candidates, including omecamtiv mecarbil,

tirasemtiv and CK-2127107, we or our licensees would not be able to exclude others from developing or commercializing these drug candidates. Furthermore, the degree of future protection of our proprietary rights is uncertain because legal means may not adequately protect our rights or permit us to gain or keep our competitive advantage.

Due to evolving legal standards relating to the patentability, validity and enforceability of patents covering pharmaceutical inventions and the claim scope of these patents, our ability to enforce our existing patents and to obtain and enforce patents that may issue from any pending or future patent applications is uncertain and involves complex legal, scientific and factual questions. The standards which the U.S. Patent and Trademark Office and its foreign counterparts use to grant patents are not always applied predictably or uniformly and are subject to change. To date, no consistent policy has emerged regarding the breadth of claims allowed in biotechnology and pharmaceutical patents. Thus, we cannot be sure that any patents will issue from any pending or future patent applications owned by or licensed to us. Even if patents do issue, we cannot be sure that the claims of these patents will be held valid or enforceable by a court of law, will provide us with any significant protection against competitive products, or will afford us a commercial advantage over competitive products. In particular:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors might not have been the first to file patent applications for the inventions covered by our pending patent applications and issued patents;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- some or all of our or our licensors' pending patent applications may not result in issued patents or the claims that issue may be narrow in scope and not provide us with competitive advantages;
- our and our licensors' issued patents may not provide a basis for commercially viable drugs or therapies or may be challenged and invalidated by third parties;
- our or our licensors' patent applications or patents may be subject to interference, opposition or similar administrative proceedings that may result in a reduction in their scope or their loss altogether;
- we may not develop additional proprietary technologies or drug candidates that are patentable; or
- the patents of others may prevent us or our partners from discovering, developing or commercializing our drug candidates.

Patent protection is afforded on a country-by-country basis. Some foreign jurisdictions do not protect intellectual property rights to the same extent as in the United States. Many companies have encountered significant difficulties in protecting and defending intellectual property rights in foreign jurisdictions. Some of our development efforts are performed in countries outside of the United States through third party contractors. We may not be able to effectively monitor and assess intellectual property developed by these contractors. We therefore may not be able to effectively protect this intellectual property and could lose potentially valuable intellectual property rights. In addition, the legal protection afforded to inventors and owners of intellectual property in countries outside of the United States may not be as protective of intellectual property rights as in the United States. Therefore, we may be unable to acquire and protect intellectual property developed by these contractors to the same extent as if these development activities were being conducted in the United States. If we encounter difficulties in protecting our intellectual property rights in foreign jurisdictions, our business prospects could be substantially harmed.

We rely on intellectual property assignment agreements with our corporate partners, employees, consultants, scientific advisors and other collaborators to grant us ownership of new intellectual property that is developed. These agreements may not result in the effective assignment to us of that intellectual property. As a result, our ownership of key intellectual property could be compromised.

Changes in either the patent laws or their interpretation in the United States or other countries may diminish the value of our intellectual property or our ability to obtain patents. For example, the America Invents Act of 2011 may affect the scope, strength and enforceability of our patent rights in the United States or the nature of proceedings which may be brought by us related to our patent rights in the United States.

If one or more products resulting from our drug candidates is approved for sale by the FDA and we do not have adequate intellectual property protection for those products, competitors could duplicate them for approval and sale in the United States without repeating the extensive testing required of us or our partners to obtain FDA approval. Regardless of any patent protection, under current law, an application for a generic version of a new chemical entity cannot be approved until at least five years after the FDA has approved the original product. When that period expires, or if that period is altered, the FDA could approve a generic version of our product regardless of our patent protection. An applicant for a generic version of our product may only be required to conduct a relatively inexpensive study to show that its product is bioequivalent to our product, and may not have to repeat the lengthy and expensive clinical trials that we or our partners conducted to demonstrate that the product is safe and effective. In the absence of adequate patent protection for our products in other countries, competitors may similarly be able to obtain regulatory approval in those countries of generic versions of our products.

We also rely on trade secrets to protect our technology, particularly where we believe patent protection is not appropriate or obtainable. However, trade secrets are often difficult to protect, especially outside of the United States. While we endeavor to use reasonable efforts to protect our trade secrets, our or our partners' employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose our information to competitors. In addition, confidentiality agreements, if any, executed by those individuals may not be enforceable or provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure. Pursuing a claim that a third party had illegally obtained and was using our trade secrets would be expensive and time-consuming, and the outcome would be unpredictable. Even if we are able to maintain our trade secrets as confidential, if our competitors independently develop information equivalent or similar to our trade secrets, our business could be harmed.

If we are not able to defend the patent or trade secret protection position of our technologies and drug candidates, then we will not be able to exclude competitors from developing or marketing competing drugs, and we may not generate enough revenue from product sales to justify the cost of development of our drugs or to achieve or maintain profitability.

If we are sued for infringing third party intellectual property rights, it will be costly and time-consuming, and an unfavorable outcome could have a significant adverse effect on our business.

Our ability to commercialize drugs depends on our ability to use, manufacture and sell those drugs without infringing the patents or other proprietary rights of third parties. Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the therapeutic areas in which we are developing drug candidates and seeking new potential drug candidates. In addition, because patent applications can take several years to issue, there may be currently pending applications, unknown to us, which could later result in issued patents that our activities with our drug candidates could infringe. There may also be existing patents, unknown to us, that our activities with our drug candidates could infringe.

Other future products of ours may be impacted by patents of companies engaged in competitive programs with significantly greater resources. Further development of these products could be impacted by these patents and result in significant legal fees.

If a third party claims that our actions infringe its patents or other proprietary rights, we could face a number of issues that could seriously harm our competitive position, including, but not limited to:

- infringement and other intellectual property claims that, even if meritless, can be costly and time-consuming to litigate, delay the regulatory approval process and divert management's attention from our core business operations;
- substantial damages for past infringement which we may have to pay if a court determines that our drugs or technologies infringe a third party's patent or other proprietary rights;
- a court prohibiting us from selling or licensing our drugs or technologies unless the holder licenses the patent or other proprietary rights to us, which it is not required to do; and
- if a license is available from a holder, we may have to pay substantial royalties or grant cross-licenses to our patents or other proprietary rights.

If any of these events occur, it could significantly harm our business and negatively affect our stock price.

We may undertake infringement or other legal proceedings against third parties, causing us to spend substantial resources on litigation and exposing our own intellectual property portfolio to challenge.

Third parties may infringe our patents. To prevent infringement or unauthorized use, we may need to file infringement suits, which are expensive and time-consuming. In an infringement proceeding, a court may decide that one or more of our patents is invalid, unenforceable, or both. In this case, third parties may be able to use our technology without paying licensing fees or royalties. Even if the validity of our patents is upheld, a court may refuse to stop the other party from using the technology at issue on the ground that the other party's activities are not covered by our patents. Policing unauthorized use of our intellectual property is difficult, and we may not be able to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States. In addition, third parties may affirmatively challenge our rights to, or the scope or validity of, our patent rights.

We may become involved in disputes with our strategic partners over intellectual property ownership, and publications by our research collaborators and clinical investigators could impair our ability to obtain patent protection or protect our proprietary information, either of which would have a significant impact on our business.

Inventions discovered under our current or future strategic alliance agreements may become jointly owned by our strategic partners and us in some cases, and the exclusive property of one of us in other cases. Under some circumstances, it may be difficult to determine who owns a particular invention or whether it is jointly owned, and disputes could arise regarding ownership or use of those inventions. These disputes could be costly and time-consuming, and an unfavorable outcome could have a significant adverse effect on our business if we were not able to protect or license rights to these inventions. In addition, our research collaborators and clinical investigators generally have contractual rights to publish data arising from their work. Publications by our research collaborators and clinical investigators relating to our research and development programs, either with or without our consent, could benefit our current or potential competitors and may impair our ability to obtain patent protection or protect our proprietary information, which could significantly harm our business.

We may be subject to claims that we or our employees have wrongfully used or disclosed trade secrets of their former employers.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to

defend against these claims. If we fail in defending these claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper or prevent our ability to develop and commercialize certain potential drugs, which could significantly harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and distract management.

Our competitors may develop drugs that are less expensive, safer or more effective than ours, which may diminish or eliminate the commercial success of any drugs that we may commercialize.

We compete with companies that have developed drugs or are developing drug candidates for cardiovascular diseases, diseases and conditions associated with muscle weakness or wasting and other diseases for which our drug candidates may be useful treatments. For example, if tirasemtiv is approved for marketing by the FDA or other regulatory authorities for the treatment of ALS, it may then compete with other potential new therapies for ALS that are currently being developed by companies such as Neuraltus Pharmaceuticals, Inc., Isis Pharmaceuticals, Inc., Genervon Biopharmaceuticals, LLC, and GlaxoSmithKline plc. In addition, BrainStorm Cell Therapeutics and Neuralstem, Inc. are each conducting clinical development of stem cell therapies for the potential treatment of ALS.

If CK-2127107 is approved by the FDA or other regulatory authorities for the potential treatment of SMA, potential competitors include Roche (in collaboration with PTC Therapeutics), AveXis, Inc., Pfizer Inc., Isis Pharmaceuticals, Inc., Trophos SA, and Bioblast Pharma, Ltd. Drugs that could compete with CK-2127107 could also compete against tirasemtiv in ALS or other neuromuscular diseases, should the appropriate clinical trials be conducted. If CK-2127107 is approved by the FDA for the potential treatment of non-neuromuscular indications associated with muscle weakness, potential competitors include Ligand Pharmaceuticals, Inc., which is developing LGD-4033, a selective androgen receptor modulator, for muscle wasting; and GTx, Inc., which is developing ostarine, a selective androgen receptor modulator, for cancer cachexia and potentially other indications; Regeneron Pharmaceuticals, Inc. (in collaboration with Sanofi), which is developing SAR391786, a monoclonal antibody targeted to GDF8, for sarcopenia; Eli Lilly & Company, which is developing LY2495655, a monoclonal antibody targeted to myostatin, for muscular atrophy after hip arthroplasty; Acceleron Pharma, which is developing ACE-083 for diseases such as inclusion body myositis and certain forms of muscular dystrophy; and Pfizer Inc., which is developing PF-06252616, a monoclonal antibody targeted to myostatin, in Duchenne muscular dystrophy. Novartis (in collaboration with Morphosys AG), is conducting clinical development with an activin type-IIB receptor antagonist, bimagrumab, to evaluate its ability to treat diseases involving the loss of muscle mass, strength and function.

If omecamtiv mecarbil is approved for marketing by the FDA or other regulatory authorities for the treatment of heart failure, it would compete against other drugs used for the treatment of acute and chronic heart failure. These include generic drugs, such as milrinone, dobutamine or digoxin and branded drugs such as Natrecor (nesiritide) and Procoralan (ivabradine). Omecamtiv mecarbil could also potentially compete against other novel drug candidates and therapies in development, such as bucindolol, which is being developed by ARCA biopharma, Inc.; Reasanz (serelaxin) and LCZ-696, which are being developed by Novartis; cenderitide (CD-NP), which is being developed by Carpicor Therapeutics, Inc., TRV-027, which is being developed by Trevena; ularitide, which is being developed by Cardiorentis Ltd.; aladorian, which is being developed by ARMGO Pharma, Inc; TRV027, which is being developed by Trevena, Inc. in partnership with Forest Laboratories, Inc.; certain cardioprotectants which are being developed by Cardioxyl Pharmaceuticals, Inc.; glial growth factor (GGF-2) which is being developed by Acorda Therapeutics, Inc.; Neurocardin, which is being developed by Zensun Sci & Tech, Ltd; Mydicar, a genetically-targeted enzyme replacement therapy for advanced heart failure which is being developed by Celladon Corporation; and levosimendan, which was acquired for development by Oxygen Biotherapeutics, Inc. In addition, there are a number of medical devices being developed for the potential treatment of heart failure.

Our competitors may:

- develop drug candidates and market drugs that are less expensive or more effective than our future drugs;
- commercialize competing drugs before we or our partners can launch any drugs developed from our drug candidates;
- hold or obtain proprietary rights that could prevent us from commercializing our products;
- initiate or withstand substantial price competition more successfully than we can;
- more successfully recruit skilled scientific workers and management from the limited pool of available talent;
- more effectively negotiate third-party licenses and strategic alliances;
- take advantage of acquisition or other opportunities more readily than we can;
- develop drug candidates and market drugs that increase the levels of safety or efficacy that our drug candidates will need to show in order to obtain regulatory approval; or
- introduce therapies or market drugs that render the market opportunity for our potential drugs obsolete.

We will compete for market share against large pharmaceutical and biotechnology companies and smaller companies that are collaborating with larger pharmaceutical companies, new companies, academic institutions, government agencies and other public and private research organizations. Many of these competitors, either alone or together with their partners, may develop new drug candidates that will compete with ours. Many of these competitors have larger research and development programs or substantially greater financial resources than we do. Our competitors may also have significantly greater experience in:

- developing drug candidates;
- undertaking preclinical testing and clinical trials;
- building relationships with key customers and opinion-leading physicians;
- obtaining and maintaining FDA and other regulatory approvals of drug candidates;
- formulating and manufacturing drugs; and
- launching, marketing and selling drugs.

If our competitors market drugs that are less expensive, safer or more efficacious than our potential drugs, or that reach the market sooner than our potential drugs, we may not achieve commercial success. In addition, the life sciences industry is characterized by rapid technological change. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Our competitors may render our technologies obsolete by improving existing technological approaches or developing new or different approaches, potentially eliminating the advantages in our drug discovery process that we believe we derive from our research approach and proprietary technologies.

We have been granted orphan designations in the U.S. and in the E.U. for tirasemtiv; however, there can be no guarantee that we will receive orphan approval for tirasemtiv, nor that we will be able to prevent third parties from developing and commercializing products that are competitive to tirasemtiv.

We have been granted orphan drug designation in the U.S. by the FDA and orphan medicinal product designation by the European Medicines Agency, in each case for tirasemtiv for the potential treatment of ALS. In the U.S., upon approval from the FDA of an NDA, products granted orphan drug approval are generally provided with seven years of marketing exclusivity in the U.S., meaning the FDA will generally not approve applications for other product candidates for the same orphan indication that contain the same active ingredient. Even if we are the first to obtain approval of an orphan product and are granted exclusivity in the U.S., there are limited circumstances under which a later competitor product may be approved for the same indication during the seven-

year period of marketing exclusivity, such as if the later product is shown to be clinically superior to our product or due to an inability to assure a sufficient quantity of the orphan drug.

Orphan medicinal product status in Europe Union can provide up to 10 years of marketing exclusivity, meaning that another application for marketing authorization of a later similar medicinal product for the same therapeutic indication will generally not be approved in the European Union. Although we may have drug candidates that may obtain orphan drug exclusivity in Europe, the orphan approval and associated exclusivity period may be modified for several reasons, including a significant change to the orphan medicinal product designations or approval criteria after-market authorization of the orphan product (*e.g.*, product profitability exceeds the criteria for orphan drug designation), problems with the production or supply of the orphan drug or a competitor drug, although similar, is safer, more effective or otherwise clinically superior than the initial orphan drug.

We are not guaranteed to maintain orphan status for tirasemtiv or to receive orphan status for tirasemtiv for any other indication or for any of our other drug candidates for any indication. If our drug candidates that are granted orphan status were to lose their status as orphan drugs or the marketing exclusivity provided for them in the U.S. or the European Union, our business and results of operations could be materially adversely affected. While orphan status for any of our products, if granted or maintained, would provide market exclusivity in the U.S. and the European Union for the time periods specified above, we would not be able to exclude other companies from manufacturing and/or selling products using the same active ingredient for the same indication beyond the exclusivity period applicable to our product on the basis of orphan drug status. Moreover, we cannot guarantee that another company will not receive approval before we do of an orphan drug application in the U.S. or the European Union for a product candidate that has the same active ingredient or is a similar medicinal product for the same indication as any of our drug candidates for which we plan to file for orphan designation and status. If that were to happen, our orphan drug applications for our drug candidate for that indication may not be approved until the competing company's period of exclusivity has expired in the U.S. or the European Union, as applicable. Further, application of the orphan drug regulations in the U.S. and Europe is uncertain, and we cannot predict how the respective regulatory bodies will interpret and apply the regulations to our or our competitors' products.

Our failure to attract and retain skilled personnel could impair our drug development and commercialization activities.

Our business depends on the performance of our senior management and key scientific and technical personnel. The loss of the services of any member of our senior management or key scientific or technical staff may significantly delay or prevent the achievement of drug development and other business objectives by diverting management's attention to transition matters and identifying suitable replacements. We also rely on consultants and advisors to assist us in formulating our research and development strategy. All of our consultants and advisors are either self-employed or employed by other organizations, and they may have conflicts of interest or other commitments, such as consulting or advisory contracts with other organizations, that may affect their ability to contribute to us. In addition, if and as our business grows, we will need to recruit additional executive management and scientific and technical personnel. There is intense competition for skilled executives and employees with relevant scientific and technical expertise, and this competition is likely to continue. Our inability to attract and retain sufficient scientific, technical and managerial personnel could limit or delay our product development activities, which would adversely affect the development of our drug candidates and commercialization of our potential drugs and growth of our business.

Any future workforce and expense reductions may have an adverse impact on our internal programs and our ability to hire and retain skilled personnel.

Our future success will depend in large part upon our ability to attract and retain highly skilled personnel. In light of our continued need for funding and cost control, we may be required to implement future workforce and

expense reductions, which could further limit our research and development activities. For example, in October 2011, we reduced our workforce by approximately 18% in order to reduce expenses and to focus resources primarily on our later-stage development programs for tirasemtiv and omecamtiv mecarbil and certain other research and development programs also directed to muscle biology. These headcount reductions and the cost control measures we have implemented may negatively affect our productivity and limit our research and development activities. We may have difficulty retaining and attracting such personnel as a result of a perceived risk of future workforce reductions. In addition, the implementation of any additional workforce or expense reduction programs may divert the efforts of our management team and other key employees, which could adversely affect our business.

We may expand our development and clinical research capabilities and, as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We may have growth in our expenditures, the number of our employees and the scope of our operations, in particular with respect to those drug candidates that we elect to develop or commercialize independently or together with a partner. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited resources, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

We currently have no sales or marketing capabilities and, if we are unable to enter into or maintain strategic alliances with marketing partners or to develop our own sales and marketing capabilities, we may not be successful in commercializing our potential drugs.

We currently have no sales, marketing or distribution capabilities. We plan to commercialize drugs that can be effectively marketed and sold in concentrated markets that do not require a large sales force to be competitive. To achieve this goal, we will need to establish our own specialized sales force and marketing organization with technical expertise and supporting distribution capabilities. Developing such an organization is expensive and time-consuming and could delay a product launch. In addition, we may not be able to develop this capacity efficiently, cost-effectively or at all, which could make us unable to commercialize our drugs. If we determine not to market our drugs on our own, we will depend on strategic alliances with third parties, such as Amgen and Astellas, which have established distribution systems and direct sales forces to commercialize them. If we are unable to enter into such arrangements on acceptable terms, we may not be able to successfully commercialize these drugs. To the extent that we are not successful in commercializing any drugs ourselves or through a strategic alliance, our product revenues and business will suffer and our stock price would decrease.

Our internal computer systems, or those of our CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our drug development programs.

Despite the implementation of security measures, our internal computer systems and those of our CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical study data from completed or ongoing clinical studies for any of our drug candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of our product candidates could be delayed.

Risks Related To Our Industry

The regulatory approval process is expensive, time-consuming and uncertain and may prevent our partners or us from obtaining approvals to commercialize some or all of our drug candidates.

The research, testing, manufacturing, selling and marketing of drugs are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, and regulations differ from country to country. Neither we nor our partners are permitted to market our potential drugs in the United States until we receive approval of a new drug application ("NDA") from the FDA. Neither we nor our partners have received NDA or other marketing approval for any of our drug candidates.

Obtaining NDA approval is a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and other applicable foreign and U.S. regulatory requirements may subject us to administrative or judicially imposed sanctions. These include warning letters, civil and criminal penalties, injunctions, product seizure or detention, product recalls, total or partial suspension of production, and refusal to approve pending NDAs or supplements to approved NDAs.

Regulatory approval of an NDA or NDA supplement is never guaranteed, and the approval process typically takes several years and is extremely expensive. The FDA and foreign regulatory agencies also have substantial discretion in the drug approval process, and the guidance and advice issued by such agencies is subject to change at any time. Despite the time and efforts exerted, failure can occur at any stage, and we may encounter problems that cause us to abandon clinical trials or to repeat or perform additional preclinical testing and clinical trials. The number and focus of preclinical studies and clinical trials that will be required for approval by the FDA and foreign regulatory agencies varies depending on the drug candidate, the disease or condition that the drug candidate is designed to address, and the regulations applicable to any particular drug candidate. In addition, the FDA may require that a proposed Risk Evaluation and Mitigation Strategy, also known as a REMS, be submitted as part of an NDA if the FDA determines that it is necessary to ensure that the benefits of the drug outweigh its risks. The FDA and foreign regulatory agencies can delay, limit or deny approval of a drug candidate for many reasons, including, but not limited to:

- they might determine that a drug candidate is not safe or effective;
- they might not find the data from nonclinical testing and clinical trials sufficient and could request that additional trials be performed;
- they might not approve our, our partner's or the contract manufacturer's processes or facilities; or
- they might change their approval policies or adopt new regulations.

Even if we receive regulatory approval to manufacture and sell a drug in a particular regulatory jurisdiction, other jurisdictions' regulatory authorities may not approve that drug for manufacture and sale. If we or our partners fail to receive and maintain regulatory approval for the sale of any drugs resulting from our drug candidates, it would significantly harm our business and negatively affect our stock price.

If we or our partners receive regulatory approval for our drug candidates, we or they will be subject to ongoing obligations to and continued regulatory review by the FDA and foreign regulatory agencies, and may be subject to additional post-marketing obligations, all of which may result in significant expense and limit commercialization of our potential drugs.

Any regulatory approvals that we or our partners receive for our drug candidates may be subject to limitations on the indicated uses for which the drug may be marketed or require potentially costly post-marketing follow-up studies or compliance with a REMS. In addition, if the FDA or foreign regulatory agencies approves any of our drug candidates, the labeling, packaging, adverse event reporting, storage, advertising, promotion and record-keeping for the drug will be subject to extensive regulatory requirements. The subsequent discovery of previously unknown problems with the drug, including adverse events of unanticipated severity or frequency, or

the discovery that adverse events or toxicities observed in preclinical research or clinical trials that were believed to be minor actually constitute much more serious problems, may result in restrictions on the marketing of the drug or withdrawal of the drug from the market.

The FDA and foreign regulatory agencies may change their policies and additional government regulations may be enacted that could prevent or delay regulatory approval of our drug candidates. We cannot predict the likelihood, nature or extent of adverse government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are not able to maintain regulatory compliance, we might not be permitted to market our drugs and our business would suffer.

If physicians and patients do not accept our drugs, we may be unable to generate significant revenue, if any.

Even if our drug candidates obtain regulatory approval, the resulting drugs, if any, may not gain market acceptance among physicians, healthcare payors, patients and the medical community. Even if the clinical safety and efficacy of drugs developed from our drug candidates are established for purposes of approval, physicians may elect not to recommend these drugs for a variety of reasons including, but not limited to:

- introduction of competitive drugs to the market;
- clinical safety and efficacy of alternative drugs or treatments;
- cost-effectiveness;
- availability of coverage and reimbursement from health maintenance organizations and other third-party payors;
- convenience and ease of administration;
- prevalence and severity of adverse events;
- other potential disadvantages relative to alternative treatment methods; or
- insufficient marketing and distribution support.

If our drugs fail to achieve market acceptance, we may not be able to generate significant revenue and our business would suffer.

The coverage and reimbursement status of newly approved drugs is uncertain and failure to obtain adequate coverage and reimbursement could limit our ability to market any drugs we may develop and decrease our ability to generate revenue.

Even if one or more of our drug candidates is approved for sale, the commercial success of our drugs in both domestic and international markets will be substantially dependent on whether third-party coverage and reimbursement is available for our drugs by the medical profession for use by their patients, which is highly uncertain. Medicare, Medicaid, health maintenance organizations and other third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement of new drugs. As a result, they may not cover or provide adequate payment for our drugs. They may not view our drugs as cost-effective and reimbursement may not be available to consumers or may be insufficient to allow our drugs to be marketed on a competitive basis. If we are unable to obtain adequate coverage and reimbursement for our drugs, our ability to generate revenue will be adversely affected. Likewise, current and future legislative or regulatory efforts to control or reduce healthcare costs or reform government healthcare programs, such as the Patient Protection Affordable Care Act and the Health Care and Education Reconciliation Act of 2010, could result in lower prices or rejection of coverage and reimbursement for our potential drugs. Changes in coverage and reimbursement policies or healthcare cost containment initiatives that limit or restrict reimbursement for any of our drug candidates that are approved could cause our potential future revenues to decline.

We may be subject to costly product liability or other liability claims and may not be able to obtain adequate insurance.

The use of our drug candidates in clinical trials may result in adverse events. We cannot predict all the possible harms or adverse events that may result from our clinical trials. We currently maintain limited product liability insurance. We may not have sufficient resources to pay for any liabilities resulting from a personal injury or other claim excluded from, or beyond the limit of, our insurance coverage. Our insurance does not cover third parties' negligence or malpractice, and our clinical investigators and sites may have inadequate insurance or none at all. In addition, in order to conduct clinical trials or otherwise carry out our business, we may have to contractually assume liabilities for which we may not be insured. If we are unable to look to our own or a third party's insurance to pay claims against us, we may have to pay any arising costs and damages ourselves, which may be substantial.

In addition, if we commercially launch drugs based on our drug candidates, we will face even greater exposure to product liability claims. This risk exists even with respect to those drugs that are approved for commercial sale by the FDA and foreign regulatory agencies and manufactured in licensed and regulated facilities. We intend to secure additional limited product liability insurance coverage for drugs that we commercialize, but may not be able to obtain such insurance on acceptable terms with adequate coverage, or at reasonable costs. Even if we are ultimately successful in product liability litigation, the litigation would consume substantial amounts of our financial and managerial resources and may create adverse publicity, all of which would impair our ability to generate sales of the affected product and our other potential drugs. Moreover, product recalls may be issued at our discretion or at the direction of the FDA and foreign regulatory agencies, other governmental agencies or other companies having regulatory control for drug sales. Product recalls are generally expensive and often have an adverse effect on the reputation of the drugs being recalled and of the drug's developer or manufacturer.

We may be required to indemnify third parties against damages and other liabilities arising out of our development, commercialization and other business activities, which could be costly and time-consuming and distract management. If third parties that have agreed to indemnify us against damages and other liabilities arising from their activities do not fulfill their obligations, then we may be held responsible for those damages and other liabilities.

Our relationships with customers, healthcare providers, clinical trial sites and professionals and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors play a primary role in the recommendation and prescription of any drug candidates for which we may obtain marketing approval. Our arrangements with customers, healthcare providers and professionals and third-party payors 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 develop, and may market, sell and distribute, our products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include, but are not limited to, the following:

- The federal healthcare anti-kickback statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federally funded healthcare programs such as Medicare and Medicaid. This statute has been broadly interpreted to apply to manufacturer arrangements with prescribers, purchasers and formulary managers, among others. Several other countries, including the United Kingdom, have enacted similar anti-kickback, fraud and abuse, and healthcare laws and regulations.

- The federal False Claims Act imposes civil penalties, including 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 or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. The government and qui tam relators have brought False Claims Act actions against pharmaceutical companies on the theory that their practices have caused false claims to be submitted to the government. There is also a separate false claims provision imposing criminal penalties.
- The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program. HIPAA also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information. HIPAA also imposes criminal liability for knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services.
- The federal Physician Sunshine Act requirements under the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, referred to together as the Affordable Care Act, require manufacturers of drugs, devices, biologics and medical supplies to report to the Department of Health and Human Services information related to payments and other transfers of value made to or at the request of covered recipients, such as physicians and teaching hospitals, and physician ownership and investment interests in such manufacturers. Payments made to physicians and research institutions for clinical trials are included within the ambit of this law.
- Analogous state laws and regulations, such as state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, and some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. Exclusion, suspension and debarment from government funded healthcare programs would significantly impact our ability to commercialize, sell or distribute any drug. If any of the physicians or other providers or entities with whom we expect to do business are found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

In addition, health care providers in the United States, including research institutions from which we or our partners obtain patient information, are subject to privacy rules under HIPAA and state and local privacy laws. In the European Union, these entities are subject to the Directive 95/46-EC of the European Parliament on the protection of individuals with regard to the processing of personal data and individual European Union member states implementing additional legislation. Other countries have similar privacy legislation. We could face substantial penalties if we knowingly receive individually identifiable health information from a health care provider that has not satisfied the applicable privacy laws. In addition, certain privacy laws and genetic testing laws may apply directly to our operations and/or those of our partners and may impose restrictions on the use and dissemination of individuals' health information and use of biological samples.

Responding to any claims relating to improper handling, storage or disposal of the hazardous chemicals and radioactive and biological materials we use in our business could be time-consuming and costly.

Our research and development processes involve the controlled use of hazardous materials, including chemicals and radioactive and biological materials. Our operations produce hazardous waste products. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from those materials. Federal, state and local laws and regulations govern the use, manufacture, storage, handling and disposal of hazardous materials. We may be sued for any injury or contamination that results from our or third parties' use of these materials. Compliance with environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production activities.

Our facilities in California are located near an earthquake fault, and an earthquake or other types of natural disasters, catastrophic events or resource shortages could disrupt our operations and adversely affect our results.

All of our facilities and our important documents and records, such as hard copies of our laboratory books and records for our drug candidates and compounds and our electronic business records, are located in our corporate headquarters at a single location in South San Francisco, California near active earthquake zones. If a natural disaster, such as an earthquake or flood, a catastrophic event such as a disease pandemic or terrorist attack, or a localized extended outage of critical utilities or transportation systems occurs, we could experience a significant business interruption. Our partners and other third parties on which we rely may also be subject to business interruptions from such events. In addition, California from time to time has experienced shortages of water, electric power and natural gas. Future shortages and conservation measures could disrupt our operations and cause expense, thus adversely affecting our business and financial results.

Risks Related To an Investment in Our Securities

We expect that our stock price will fluctuate significantly, and you may not be able to resell your shares at or at or above your investment price.

The stock market, particularly in recent years, has experienced significant volatility, particularly with respect to pharmaceutical, biotechnology and other life sciences company stocks, which often does not relate to the operating performance of the companies represented by the stock. Factors that could cause volatility in the market price of our common stock include, but are not limited to:

- announcements concerning any of the clinical trials for our drug candidates, such as tirasemtiv for the potential treatment of ALS, CK-2127107 for the potential treatment of SMA or other indications associated with muscle weakness and omecamtiv mecarbil for the potential treatment of heart failure (including, but not limited to, the timing of initiation or completion of such trials and the results of such trials, and delays or discontinuations of such trials, including delays resulting from slower than expected or suspended patient enrollment or discontinuations resulting from a failure to meet pre-defined clinical end points);
- announcements concerning our strategic alliance with Amgen or Astellas or future strategic alliances;
- failure or delays in entering additional drug candidates into clinical trials;
- failure or discontinuation of any of our research programs;
- issuance of new or changed securities analysts' reports or recommendations;
- failure or delay in establishing new strategic alliances, or the terms of those alliances;
- market conditions in the pharmaceutical, biotechnology and other healthcare-related sectors;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- developments or disputes concerning our intellectual property or other proprietary rights;

- introduction of technological innovations or new products by us or our competitors;
- issues in manufacturing our drug candidates or drugs;
- market acceptance of our drugs;
- third-party healthcare coverage and reimbursement policies;
- FDA or other U.S. or foreign regulatory actions affecting us or our industry;
- litigation or public concern about the safety of our drug candidates or drugs;
- additions or departures of key personnel;
- substantial sales of our common stock by our existing stockholders, whether or not related to our performance;
- automated trading activity by algorithmic and high-frequency trading programs; and
- volatility in the stock prices of other companies in our industry or in the stock market generally.

These and other external factors may cause the market price and demand for our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert our management's time and attention.

If the ownership of our common stock continues to be highly concentrated, it may prevent you and other stockholders from influencing significant corporate decisions and may result in conflicts of interest that could cause our stock price to decline.

As of February 26, 2016, our executive officers, directors and their affiliates beneficially owned or controlled approximately 10.2% of the outstanding shares of our common stock (after giving effect to the exercise of all outstanding vested and unvested options, restricted stock units and warrants). Accordingly, these executive officers, directors and their affiliates, acting as a group, will have substantial influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets or any other significant corporate transactions. These stockholders may also delay or prevent a change of control of us, even if such a change of control would benefit our other stockholders. The significant concentration of stock ownership may adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

Volatility in the stock prices of other companies may contribute to volatility in our stock price.

The stock market in general, and the NASDAQ stock exchanges and the market for technology companies in particular, have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Further, there has been particular volatility in the market prices of securities of early stage and clinical stage life sciences companies. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted. A securities class action suit against us could result in substantial costs, potential liabilities and the diversion of management's attention and resources, and could harm our reputation and business.

Our common stock is thinly traded and there may not be an active, liquid trading market for our common stock.

There is no guarantee that an active trading market for our common stock will be maintained on NASDAQ, or that the volume of trading will be sufficient to allow for timely trades. Investors may not be able to sell their shares quickly or at the latest market price if trading in our stock is not active or if trading volume is limited. In addition, if trading volume in our common stock is limited, trades of relatively small numbers of shares may have a disproportionate effect on the market price of our common stock.

Our stockholders will experience substantial additional dilution if outstanding options or warrants are exercised for common stock.

As of February 26, 2016, there were 5,709,522 shares of common stock issuable upon the exercise of warrants, having a weighted average exercise price of $5.31 per share, and 4,827,005 shares of common stock issuable upon the exercise of stock options outstanding, having a weighted average exercise price of $10.31 per share. The exercise of outstanding options or warrants for common stock would be substantially dilutive to the outstanding shares of common stock. Any dilution or potential dilution may cause our stockholders to sell their shares, which would contribute to a downward movement in the stock price of our common stock.

Ownership changes may limit our ability to use our net operating losses and tax credits in the future.

In general, under Section 382 of the Internal Revenue Code ("Section 382"), a corporation that undergoes an 'ownership change' is subject to limitations on its ability to utilize its pre-change net operating losses and tax credits to offset future taxable income. We have performed a Section 382 analysis and do not believe that we have experienced an ownership change since 2006. A portion of our existing net operating losses and tax credits are subject to limitations arising from previous ownership changes. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 and result in additional limitations. We intend to continue to monitor public filings made by third parties with the SEC to assess whether an ownership change under Section 382 has occurred. Our ability to accurately assess any such ownership change is limited by the timeliness and accuracy of these public filings.

Evolving regulation of corporate governance and public disclosure may result in additional expenses, use of resources and continuing uncertainty.

Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and new SEC regulations and NASDAQ Stock Market LLC rules create uncertainty for public companies. We regularly evaluate and monitor developments with respect to new and proposed laws, regulations and standards. We cannot accurately predict or estimate the amount of the additional costs we may incur in connection with complying with such laws, regulations and standards or the timing of these costs. For example, compliance with the internal control requirements of Section 404 of the Sarbanes-Oxley Act has to date required us to commit significant resources to document and test the adequacy of our internal control over financial reporting. We can provide no assurance as to conclusions of management or by our independent registered public accounting firm with respect to the effectiveness of our internal control over financial reporting in the future. In addition, the SEC has adopted regulations that require us to file corporate financial statement information in an interactive data format known as XBRL. We may incur significant costs and need to invest considerable resources to remain in compliance with these regulations.

These new or changed laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

We intend to maintain high standards of corporate governance and public disclosure. As a result, we intend to invest the resources necessary to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies, due to ambiguities related to practice or otherwise, regulatory authorities may initiate legal proceedings against us, which could be costly and time-consuming, and our reputation and business may be harmed.

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

We have paid no cash dividends on any of our classes of capital stock to date and we currently intend to retain our future earnings, if any, to fund the development and growth of our businesses. In addition, the terms of existing or any future debts may preclude us from paying these dividends.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Our facilities consist of approximately 81,587 square feet of research and office space. We lease 50,195 square feet located at 280 East Grand Avenue, and 31,392 square feet at 256 East Grand Avenue, in South San Francisco, California until 2018 with an option to renew the lease for an additional three years. We believe that these facilities are suitable and adequate for our current needs.

Item 3. ***Legal Proceedings***

On November 28, 2014, Pharm-Olam International, Ltd. ("Pharm-Olam") filed a lawsuit in the U.S. District Court for the Middle District of North Carolina, captioned Pharm-Olam International, Ltd. v. Cytokinetics, Inc. and Datatrak International, Inc., Civil Action No. 1:14-cv-01000 (the "North Carolina Lawsuit") in connection with its performance as the data management vendor for the BENEFIT-ALS clinical trial. Under the agreement between Pharm-Olam and us, Pharm-Olam was obligated to provide a variety of services, including building and maintaining the electronic system for BENEFIT-ALS that combined the electronic data capture ("EDC") for clinical data and the interactive web response system ("IWRS") used for patient randomization and treatment assignments to either tirasemtiv or placebo. Pharm-Olam's failure to conduct these services in accordance with the agreement, regulatory requirements and industry standards resulted in programming errors in the IWRS which caused delay of the trial and additional expenses. Pharm-Olam entered into an agreement with Datatrak International Inc. ("Datatrak") by which Datatrak provided the core EDC and IWRS system for BENEFIT-ALS. In the North Carolina lawsuit, Pharm-Olam sought declaratory judgment that (1) the limitation of liability provisions in the agreement between Pharm-Olam and us are enforceable and limit Pharm-Olam's liability for the claims asserted by us to the direct services fees, and (2) Pharm-Olam's subcontractor, Datatrak, must indemnify, defend and hold harmless Pharm-Olam for the claims asserted against it by Cytokinetics, pursuant to the indemnification provision in the agreement between Pharm-Olam and Datatrak. On December 17, 2014, we filed a motion to dismiss or transfer the North Carolina Lawsuit to the U.S. District Court for the Northern District of California based on lack of jurisdiction and improper venue. On September 16, 2015, the U.S. District Court for the Middle District of North Carolina dismissed the North Carolina lawsuit.

On December 1, 2014, we filed a lawsuit in the U.S. District Court for the Northern District of California, captioned Cytokinetics, Inc. v. Pharm-Olam International, Ltd., Case No. 3:14-cv-05256 (the "California Lawsuit"). This lawsuit alleges fraudulent inducement, breach of contract and negligence by Pharm-Olam in connection with its performance as the data management vendor for the BENEFIT-ALS clinical trial. We are

seeking monetary damages from Pharm-Olam. On January 23, 2015, Pharm-Olam filed a motion to dismiss the complaint, or in the alternative, to transfer the California Lawsuit to U.S. District Court for the Middle District of North Carolina. The motion to dismiss was denied in part and granted in part and the motion to transfer was denied on March 10, 2015. Pharm-Olam answered the complaint on March 24, 2015. Datatrak filed a motion to intervene on June 5, 2015, which the court granted on July 1, 2015. Datatrak seeks a declaratory judgment that the indemnification provision of the agreement between Pharm-Olam and Datatrak does not require Datatrak to indemnify Pharm-Olam for the claims asserted against Pharm-Olam by Cytokinetics. This is the only pending matter among the parties because the U.S. District Court for the Middle District of North Carolina dismissed the North Carolina lawsuit on September 16, 2015.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Prior to our initial public offering on April 29, 2004, there was no public market for our common stock. Our common stock was quoted under the symbol "CYTK" on the NASDAQ Global Market from the date of our initial public offering through December 19, 2012, and has since been quoted on the NASDAQ Capital Market. The following table sets forth the high and low closing sales price per share of our common stock as reported on the NASDAQ Global Market or NASDAQ Capital Market, as applicable, for the periods indicated.

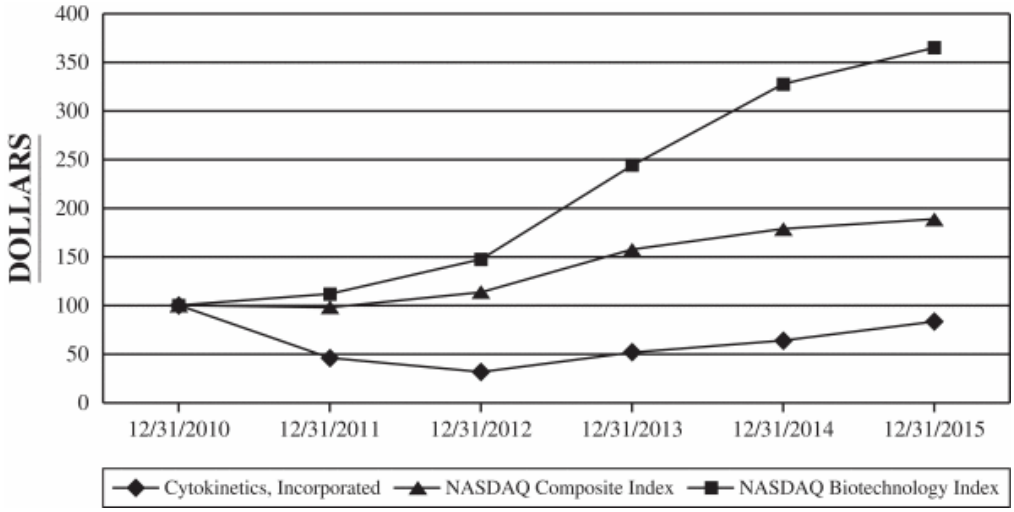
	Closing Sale Price	
	High	**Low**
2014:		
First Quarter	$10.55	$6.72
Second Quarter	$12.99	$4.01
Third Quarter	$ 4.90	$3.52
Fourth Quarter	$ 8.01	$3.07
2015:		
First Quarter	$ 8.17	$6.25
Second Quarter	$ 7.43	$5.51
Third Quarter	$ 7.79	$6.01
Fourth Quarter	$12.95	$6.60

On February 26, 2016, the last reported sale price for our common stock on the NASDAQ Capital Market was $6.85 per share. We currently expect to retain future earnings, if any, for use in the operation and expansion of our business and have not paid and do not in the foreseeable future anticipate paying any cash dividends. As of February 26, 2016, there were 63 holders of record of our common stock.

Equity Compensation Information

Information regarding our equity compensation plans and the securities authorized for issuance thereunder is set forth in Part III, Item 12.

Comparison of Historical Cumulative Total Return Among Cytokinetics, Incorporated, the NASDAQ Stock Market (U.S.) Index and the NASDAQ Biotechnology Index (*)



(*) The above graph shows the cumulative total stockholder return of an investment of $100 in cash from December 31, 2010 through December 31, 2015 for: (i) our common stock; (ii) the NASDAQ Stock Market (U.S.) Index; and (iii) the NASDAQ Biotechnology Index. All values assume reinvestment of the full amount of all dividends. Stockholder returns over the indicated period should not be considered indicative of future stockholder returns.

	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15
Cytokinetics, Incorporated	$100.00	$ 45.93	$ 31.58	$ 51.84	$ 63.88	$ 83.42
NASDAQ Composite Index	$100.00	$ 98.20	$113.82	$157.44	$178.53	$188.75
NASDAQ Biotechnology Index	$100.00	$111.81	$147.48	$244.24	$327.52	$364.93

The information contained under this caption "Comparison of Historical Cumulative Total Return Among Cytokinetics, Incorporated, the NASDAQ Stock Market (U.S.) Index and the NASDAQ Biotechnology Index" shall not be deemed to be soliciting material or to be filed with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference into such filing.

Sales of Unregistered Securities

On December 26, 2014, we sold 2,040,816 shares of our common stock at a price per share of $4.90 and an aggregate purchase price of $10.0 million to Astellas.

We relied on the exemption from registration contained in Section 4(2) of the Securities Act, and Regulation D, Rule 506 thereunder, in connection with the issuance and sale of the common stock to Astellas.

Item 6. ***Selected Financial Data***

The following selected financial data should be read in conjunction with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Item 8, "Financial Statements and Supplemental Data" of this report on Form 10-K.

	Year Ended December 31,				
	2015	2014	2013	2012	2011
	(In thousands, except per share amounts)				
Statement of Operations Data:					
Revenues:					
Research and development revenues from related parties(1)	$ 14,665	$ 19,538	$ 2,019	$ 4,177	$ 2,054
Research and development, grant and other revenues	75	17,566	7,547	3,382	1,946
License revenues from related parties(1)	13,918	—	17,230	—	—
License revenues	—	9,836	3,852	—	—
Total revenues	28,658	46,940	30,648	7,559	4,000
Operating expenses:					
Research and development	46,398	44,426	49,450	35,643	37,182
General and administrative	19,667	17,268	15,092	12,429	13,590
Restructuring charges (reversals)	—	—	—	(56)	1,192
Total operating expenses	66,065	61,694	64,542	48,016	51,964
Operating loss	(37,407)	(14,754)	(33,894)	(40,457)	(47,964)
Interest and other income (expense), net	(94)	108	177	87	104
Loss before income taxes	(37,501)	(14,646)	(33,717)	(40,370)	(47,860)
Income tax provision (benefit)	—	—	—	—	—
Net loss	(37,501)	(14,646)	(33,717)	(40,370)	(47,860)
Deemed dividend related to beneficial conversion feature of convertible preferred stock	—	—	—	(1,307)	(2,857)
Net loss allocable to common stockholders:	$(37,501)	$(14,646)	$(33,717)	$(41,677)	$(50,717)
Net loss per share allocable to common stockholders:(2)					
Basic and Diluted	$ (0.97)	$ (0.41)	$ (1.24)	$ (2.30)	$ (4.30)
Weighted average shares used in computing net loss per share allocable to common stockholders:(3)					
Basic and Diluted	38,814	35,709	27,275	18,107	11,800

	As of December 31,				
	2015	2014	2013	2012	2011
	(In thousands)				
Balance Sheet Data:					
Cash and cash equivalents, and investments	$ 111,621	$ 83,228	$ 80,230	$ 74,000	$ 49,023
Restricted cash	—	—	—	—	196
Working capital	81,458	107,276	52,634	69,322	46,548
Total assets	115,237	132,968	83,188	77,551	52,773
Long-term debt	14,639	—	—	—	—
Accumulated deficit	(534,744)	(497,243)	(482,597)	(448,880)	(408,510)
Total stockholders' equity(2)	68,590	92,064	54,442	70,085	48,178

(1) Revenues from related parties consisted of revenues recognized under our research and development arrangements with related parties, including Amgen and Astellas. See Note 7, "Related Parties and Related Party Transactions" in the Notes to Consolidated Financial Statements for further details.

(2) On June 24, 2013, we effected a one-for-six reverse stock split of our common stock through an amendment to our amended and restated certificate of incorporation (the "COI Amendment"). As of the effective time of the reverse stock split, every six shares of our issued and outstanding common stock were converted into one issued and outstanding share of common stock, without any change in par value per share. The reverse stock split affected all shares of our common stock outstanding immediately prior to the effective time of the reverse stock split, as well as the number of shares of common stock available for issuance under equity incentive plans. In addition, the reverse stock split effected a reduction in the number of shares of common stock issuable upon the conversion of shares of preferred stock or upon the exercise of stock options or warrants outstanding immediately prior to the effectiveness of the reverse stock split. No fractional shares were issued as a result of the reverse stock split. Stockholders who would otherwise have been entitled to receive a fractional share received cash payments in lieu thereof. In addition, the COI Amendment reduced the number of authorized shares of common stock to 81.5 million.

All references to shares of common stock and per share data for all periods presented in the accompanying selected financial data have been adjusted to reflect the reverse stock split on a retroactive basis.

(3) In April 2011, we sold 883,333 shares of common stock, 8,070 shares of Series A convertible preferred stock and warrants to purchase 1,114,168 shares of common stock to Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited for net proceeds of approximately $19.9 million. In the fourth quarter of 2011, we sold 429,868 shares of common stock through McNicoll, Lewis & Vlak LLC ("MLV") for net proceeds of $2.4 million. In June 2012, we issued to various investors (i) 9,320,176 shares of common stock for a purchase price of $4.56 per share, (ii) 23,026 shares of Series B convertible preferred stock for a purchase price of $760.00 per share, and (iii) warrants to purchase 7,894,704 shares of common stock at an exercise price of $5.28 per share, for aggregate gross proceeds of approximately $60.0 million. In 2012, we sold 432,724 shares of common stock through MLV for net proceeds of $2.8 million. In June 2013, we sold 1,404,100 shares of common stock to Amgen at a price per share of $7.12 and an aggregate purchase price of $10.0 million, pursuant to the Amgen Agreement Amendment. In 2013, we sold 1,170,583 shares of common stock through MLV for net proceeds of $7.5 million. In January, 2014 we sold 364,103 shares of common stock through MLV for net proceeds of $2.4 million. In February 2014, we sold 5,031,250 shares of common stock through an underwritten public offering at a price per share of $8.00 and net proceeds of $37.5 million. In December 2014, we sold 2,040,816 shares of common stock to Astellas at a price per share of $4.90 and an aggregate purchase price of $10.0 million. The 1,114,168 warrants issued in 2011 to Deerfield, expired unexercised on April 20, 2015. In 2015, we sold 808,193 shares of common stock through Cantor pursuant to the CE Offering Sales Agreement for net proceeds of $8.7 million. See Note 12, "Stockholders' Equity" in the Notes to Consolidated Financial Statements for further details.

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

This discussion and analysis should be read in conjunction with our financial statements and accompanying notes included elsewhere in this report. Operating results are not necessarily indicative of results that may occur in future periods.

Overview

We were incorporated in Delaware in August 1997 as Cytokinetics, Incorporated. We are a late-stage biopharmaceutical company focused on the discovery and development of first-in-class muscle activators as potential treatments for debilitating diseases in which muscle performance is compromised and/or declining. Our research and development activities relating to the biology of muscle function have evolved from our knowledge and expertise regarding the cytoskeleton, a complex biological infrastructure that plays a fundamental role within every human cell. Our most advanced research and development programs relate to the biology of muscle function and are directed to small molecule modulators of the contractility of skeletal or cardiac muscle. We are also conducting earlier-stage research directed to other compounds with the potential to modulate muscle contractility and other muscle functions, such as growth, energetics and metabolism.

Our drug candidates currently in clinical development are our skeletal muscle activators tirasemtiv and CK-2127107, and our cardiac muscle activator omecamtiv mecarbil. Cytokinetics retains exclusive rights to tirasemtiv, which is being evaluated for the potential treatment of amyotrophic lateral sclerosis ("ALS"). CK-2127107 is being evaluated for the potential treatment of spinal muscle atrophy ("SMA") and for potential use in other indications associated with muscle weakness under a strategic alliance with Astellas Pharma Inc. ("Astellas") established in June 2013 and expanded in December 2014. Omecamtiv mecarbil is being evaluated for the potential treatment of heart failure under a strategic alliance with Amgen established in 2006.

Muscle Contractility Programs

Skeletal Muscle Contractility Program

Tirasemtiv.

Our lead drug candidate from our skeletal muscle contractility program, tirasemtiv (formerly known as CK-2017357), is a fast skeletal muscle troponin activator. Cytokinetics retains exclusive rights to tirasemtiv and is independently developing this drug candidate for the potential treatment of ALS. We conducted a Phase 2 clinical trials program for tirasemtiv, including a Phase 2b clinical trial in patients with ALS, known as BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS). Based on the results of BENEFIT-ALS, we started a Phase 3 clinical development program for tirasemtiv in patients with ALS in July 2015 known as VITALITY-ALS (Ventilatory Investigation of Tirasemtiv and Assessment of Longitudinal Indices after Treatment for a Year in ALS). Tirasemtiv has been granted orphan drug designation and fast track status by the FDA and orphan medicinal product designation by the European Medicines Agency, in each case for the potential treatment of ALS.

Further details regarding tirasemtiv and VITALITY-ALS can be found in Item 1 of this report under "Research and Development Programs — Skeletal Muscle Contractility Program — Tirasemtiv."

In July 2015, we were awarded a $1.5 million grant from The ALS Association (the "ALSA Grant") to support the conduct of VITALITY-ALS as well as the collection of clinical data and plasma samples from patients in VITALITY-ALS in order to help advance the discovery of potentially useful biomarkers in ALS. The grant provides funding for collaboration among Cytokinetics, The ALS Association and the Barrow Neurological Institute to enable plasma samples collected from patients enrolled in VITALITY-ALS to be added to The Northeastern ALS Consortium (NEALS) Repository, a resource for the academic research community to identify biomarkers that may help to assess disease progression and underlying disease mechanisms in ALS. On

August 28, 2015 Cytokinetics achieved its first milestone under the ALSA Grant which triggered a payment of $0.5 million in accordance with the ALSA Grant. We recorded $0.1 million as grant revenue as qualified expenses were incurred and approved by management. At December 31, 2015, we had $0.4 million of deferred revenue under the ALSA Grant, reflecting the unrecognized portion of the grant revenue.

The clinical trials program for tirasemtiv may proceed for several years, and we will not be in a position to generate any revenues or material net cash flows from sales of this drug candidate until the program is successfully completed, regulatory approval is achieved, and the drug is commercialized. Tirasemtiv is at too early a stage of development for us to predict if or when this may occur. Our expenditures will increase if and as we move tirasemtiv into later stage development.

CK-2127107 and Other Skeletal Muscle Activators

We are also developing CK-2127107, a structurally distinct fast skeletal muscle troponin activator, under a strategic alliance with Astellas established in June 2013 and expanded in December 2014. Astellas holds an exclusive license to develop and commercialize CK-2127107 worldwide, subject to our development and commercialization participation rights. Under this strategic alliance, Cytokinetics conducted five Phase 1 clinical trials of CK-2127107 and started a Phase 2 clinical trial of CK-2127107 in patients with spinal muscular atrophy (SMA) in December 2015. CK-2127107 is also being evaluated for the potential use in other indications associated with muscle weakness. We expect that Astellas will initiate a Phase 2 clinical trial in patients with chronic obstructive pulmonary disease ("COPD") in the first half of 2016. We are also conducting joint research with Astellas directed to next-generation skeletal muscle activators.

Further details regarding our strategic alliance with Astellas can be found in Item 1 of this report under "Research and Development Programs — Skeletal Muscle Contractility Program — CK-2127107" and "Other Skeletal Muscle Activators — Astellas Strategic Alliance."

During the years ended December 31, 2015, 2014 and 2013, the Company recorded license revenue of $13.9 million, $9.8 million and $3.9 million, respectively, reimbursement of sponsored research and development activities of $12.2 million, $15.4 million and $6.4 million, respectively, and milestone revenues of zero, $17.0 million and zero, in connection with our strategic alliance with Astellas. See our consolidated financial statements for a further discussion of our revenue recognition policy under our agreement with Astellas.

The clinical trials programs for CK-2127107 may proceed for several years, and we will not be in a position to generate any revenues or material net cash flows from sales of this drug candidate until the program is successfully completed, regulatory approval is achieved, and the drug is commercialized. CK-2127107 is at too early a stage of development for us to predict if or when this may occur. Our expenditures will increase if Astellas terminates development of CK-2127107 or related compounds and we elect to develop them independently, or if we conduct early-stage development for certain agreed indications at our initial expense, subject to reimbursement if development continues under the collaboration.

Ongoing Research in Skeletal Muscle Activators.

Our research on the direct activation of skeletal muscle continues in two areas. We are conducting translational research in preclinical models of disease and muscle function with fast skeletal muscle troponin activators to explore the potential clinical applications of this novel mechanism in diseases or conditions associated with skeletal muscle dysfunction. We also intend to conduct preclinical research on other chemically and pharmacologically distinct mechanisms to activate the skeletal sarcomere. We are conducting a joint research program with Astellas directed to the discovery of next-generation skeletal muscle activators. Under the Amended Astellas Agreement, the joint research program will continue through 2016 and Astellas will reimburse us for certain research activities.

Research and Development Expenses. We recorded research and development expenses for activities relating to our skeletal muscle contractility program of approximately $36.3 million, $32.9 million and $40.8 million in the years ended December 31, 2015, 2014 and 2013, respectively. We recognized research and development revenue from Astellas of $12.2 million, $32.4 million, and $6.4 million in the years ended December 31, 2015, 2014 and 2013, respectively, consisting of milestone payments, and reimbursements of full-time employee equivalents ("FTEs") and other expenses. We anticipate that our expenditures relating to the research and development of compounds in our skeletal muscle contractility program will increase significantly if and as we advance tirasemtiv, CK-2127107 or other compounds from this program into and through development.

Cardiac Muscle Contractility Program

Our lead drug candidate from our cardiac muscle contractility program, omecamtiv mecarbil (formerly known as CK-1827452), is a novel cardiac muscle myosin activator that is being developed under a strategic alliance with Amgen. In June 2013, we expanded this collaboration to include Japan. As a result, Amgen holds an exclusive license to develop and commercialize omecamtiv mecarbil worldwide, subject to our development and commercialization participation rights.

Omecamtiv mercarbil has been the subject of an extensive Phase 1 and Phase 2 clinical trials program. In November 2015, we announced the results of COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure), the last planned Phase 2 trial of omecamtiv mecarbil to be conducted prior to a decision regarding the potential advancement of this drug candidate to Phase 3. COSMIC-HF was designed to assess the pharmacokinetics and tolerability of omecamtiv mecarbil dosed orally in patients with heart failure and left ventricular systolic dysfunction and its effects on echocardiographic measures of cardiac function. An intravenous formulation of omecamtiv mecarbil was studied in a Phase 2b clinical trial known as ATOMIC-AHF (Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure), which was designed to evaluate the safety and efficacy of omecamtiv mecarbil in patients with left ventricular systolic dysfunction who are hospitalized with acute heart failure. We expect to continue our joint research with Amgen directed to next-generation compounds in our cardiac muscle contractility program in 2016.

Further details regarding our strategic alliance with Amgen can be found in Item 1 of this report under "Research and Development Programs — Cardiac Muscle Contractility Program — Amgen Strategic Alliance."

During the years ended December 31, 2015, 2014 and 2013, we recorded $2.5 million, $4.5 million and $2.0 million, respectively, in reimbursement of sponsored research and development activities relating to the Amgen Agreement. During the year ended December 31, 2013, we recorded $17.2 million in license revenue under the Amgen Agreement, and no such revenue during the years ended December 31, 2015 and 2014, respectively. See our consolidated financial statements for a further discussion of our revenue recognition policy under our agreement with Amgen.

Omecamtiv Mecarbil Clinical Development

COSMIC-HF.

COSMIC-HF is a Phase 2, double-blind, randomized, placebo-controlled, multicenter, clinical trial designed to assess the pharmacokinetics and tolerability of omecamtiv mecarbil dosed orally in patients with heart failure and left ventricular systolic dysfunction as well as its effects on echocardiographic measures of cardiac function. COSMIC-HF was conducted by Amgen in collaboration with Cytokinetics. The study began with two dose escalation cohorts of 40 patients each, randomized 1:1:1:1 to placebo or one of three different modified release oral formulations of omecamtiv mecarbil for seven days. The omecamtiv mecarbil dose in the first of these two dose escalation cohorts was 25 mg twice daily; in the second, it was 50 mg twice daily. The purpose of the dose escalation cohorts was to select one of the three modified release oral formulations of omecamtiv mecarbil for further evaluation in a larger group of patients treated for a longer period of time.

The expansion phase of COSMIC-HF was designed to evaluate the pharmacokinetics, pharmacodynamics, safety and tolerability of the modified release oral formulation omecamtiv mecarbil selected based on the results of the two dose escalation cohorts in 448 patients with chronic heart failure and left ventricular systolic dysfunction. Patients were randomized 1:1:1 to receive either placebo or treatment with omecamtiv mecarbil 25 mg twice daily or a dose titration group where 25 mg twice daily dosing could be increased to 50 mg twice daily depending on plasma concentrations of omecamtiv mecarbil after two weeks of treatment with the 25 mg dose. In November 2015, we announced the results from the expansion phase of COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure) that were presented at American Heart Association.

Data from the expansion phase showed that dose titration controlled patient exposure to omecamtiv mecarbil. Approximately 60 percent of patients in the dose titration group escalated dosing to 50 mg twice daily.

Following 20 weeks of treatment, statistically significant improvements were observed in pre-specified secondary endpoint measures of cardiac function in the dose titration group, compared to placebo. Systolic ejection time increased by 25.0 msec ($p<0.001$), stroke volume increased by 3.63 mL ($p=0.022$) and heart rate decreased by 2.97 beats per min ($p=0.007$). Left ventricular end-systolic and end-diastolic dimensions decreased by 1.79 mm ($p=0.003$) and 1.29 mm ($p=0.013$), respectively, and were associated with statistically significant reductions in left ventricular end-systolic and end-diastolic volumes. N-terminal pro-brain natriuretic peptide (NT-proBNP) decreased by 970 pg/mL ($p=0.007$). Additionally, in the 25 mg twice daily group, there were statistically significant increases in systolic ejection time and stroke volume and a decrease in NT-proBNP. All changes are from baseline compared to placebo. The pharmacodynamic effects of omecamtiv mecarbil were generally dose dependent and larger in patients that received oral dosing with 50 mg twice daily.

Adverse events (AEs), including serious AEs, in patients on omecamtiv mecarbil were comparable to placebo. The incidence of adjudicated deaths (2.7 percent died on placebo, 1.4 percent died onomecamtiv mecarbil), myocardial infarction (1.34 percent on placebo, 0.34 percent on omecamtiv mecarbil) and unstable angina (0 percent on placebo, 0.34 percent on omecamtiv mecarbil) was similar. Other cardiac AEs were generally balanced between placebo and active treatment groups. In the omecamtiv mecarbil groups, compared to placebo, cardiac troponin increased by 0.001 ng/mL and 0.006 ng/mL (median change from baseline at week 20) in the 25 mg twice daily group and dose titration group, respectively. Events of increased troponin (n=278 across all treatment groups) were independently adjudicated and none were determined to be myocardial ischemia or infarction.

ATOMIC-AHF. ATOMIC-AHF (Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure) was an international, randomized, double-blind, placebo-controlled, Phase 2b clinical trial of intravenous omecamtiv mecarbil in patients with left ventricular systolic dysfunction hospitalized with acutely decompensated heart failure, completed in 2013. ATOMIC-AHF was conducted by Amgen in collaboration with Cytokinetics. This clinical trial enrolled over 600 patients in three sequential, ascending-dose cohorts. In each cohort, patients were randomized to receive omecamtiv mecarbil or placebo. The primary efficacy objective of this trial was to evaluate the effect of 48 hours of intravenous omecamtiv mecarbil compared to placebo on dyspnea (shortness of breath). The secondary objectives were to assess the safety and tolerability of three dose levels of intravenous omecamtiv mecarbil compared with placebo and to evaluate the effects of 48 hours of treatment with intravenous omecamtiv mecarbil on additional measures of dyspnea, patients' global assessments, change in N-terminal pro brain-type natriuretic peptide (a biomarker associated with the severity of heart failure) and short-term clinical outcomes in these patients. In addition, the trial evaluated the relationship between plasma concentrations of omecamtiv mecarbil and echocardiographic parameters in patients with acute heart failure.

The primary efficacy endpoint of dyspnea symptom response was not met; however, the study demonstrated favorable trends between the dose and plasma concentration of *omecamtiv mecarbil* and dyspnea response. The incidence of worsening heart failure within seven days of initiating treatment appeared lower in each of the cohorts on omecamtiv mecarbil compared to the pooled placebo group of patients. Rates of adverse events (AEs), serious AEs, adjudicated deaths and hospitalizations were similar between omecamtiv mecarbil and placebo

groups. Omecamtiv mecarbil was not associated with an increased incidence of tachyarrhythmias nor were heart rate or blood pressure adversely affected.

The clinical trials program for omecamtiv mecarbil may proceed for several years, and we will not be in a position to generate any revenues or material net cash flows from sales of this drug candidate until the program is successfully completed, regulatory approval is achieved, and the drug is commercialized. Omecamtiv mecarbil is at too early a stage of development for us to predict if or when this may occur.

Ongoing Research in Cardiac Muscle Contractility. We agreed with Amgen to additional research activities intended to be conducted through 2014 and 2015 under the research plan directed to next-generation compounds in our cardiac muscle contractility program. We expect to continue our joint research program with Amgen into 2016. Under the Amgen Agreement, Amgen will reimburse us for certain research activities we perform.

Research and Development Expenses. We recorded research and development expenses for activities relating to our cardiac muscle contractility program of approximately $5.8 million, $7.4 million and $3.4 million in the years ended December 31, 2015, 2014 and 2013, respectively. We recognized research and development revenue from Amgen of $2.5 million, $4.5 million and $2.0 million in the years ended December 31, 2015, 2014 and 2013, respectively, consisting of reimbursements of FTEs and other expenses. We anticipate that our expenditures relating to the research and development of compounds in our cardiac muscle contractility program will increase if we participate in the future advancement of omecamtiv mecarbil through clinical development. Our expenditures will also increase if Amgen terminates development of omecamtiv mecarbil or related compounds and we elect to develop them independently, or if we elect to co-fund later-stage development of omecamtiv mecarbil or other compounds in our cardiac muscle contractility program under our collaboration and option agreement with Amgen.

Beyond Muscle Contractility

We have developed preclinical expertise in the mechanics of skeletal, cardiac and smooth muscle that extends from proteins to tissues to intact animal models. Our translational research in muscle contractility has enabled us to better understand the potential impact of small molecule compounds that increase skeletal or cardiac muscle contractility and to apply those findings to the further evaluation of our drug candidates in clinical populations. In addition to contractility, the other major functions of muscle include metabolism, growth and energetics, with each of these functions playing a role in certain diseases that could benefit from novel mechanism treatments. Accordingly, our knowledge of muscle contractility may serve as an entry point to the discovery of novel treatments for disorders involving muscle functions other than muscle contractility. We are leveraging our current understandings of muscle biology to investigate new ways of modulating these other aspects of muscle function for other potential therapeutic applications. For example, we are conducting research with compounds that affect muscle growth and that may have applications for serious diseases and medical conditions such as cachexia. Cachexia is a condition that can be associated with cancer, heart failure, chronic obstructive pulmonary disease or other conditions. This syndrome is characterized by the loss of muscle mass and may lead to weakness and disability. We are performing research on compounds that may increase muscle mass and which may impact patient functionality or potentially alter the course of diseases associated with muscle wasting.

Development Risks

The successful development of any of our drug candidates is highly uncertain. We cannot estimate with certainty or know the exact nature, timing and costs of the activities necessary to complete the development of any of our drug candidates or the date of completion of these development activities due to numerous risks and uncertainties, including, but not limited to:

- the results of clinical trials of our drug candidates conducted by us or our partners may not support the further clinical development of those drug candidates;

- further clinical development of tirasemtiv for the potential treatment of ALS will require significant additional funding and we may be unable to obtain such additional funding on acceptable terms, if at all;
- the FDA and/or other regulatory authorities may not accept effects on respiratory function, including SVC, as an appropriate clinical trial endpoint to support the registration of tirasemtiv for the treatment of ALS;
- decisions made by Amgen with respect to the development of omecamtiv mecarbil and by Astellas with respect to the development of CK-2127107;
- the uncertainty of the timing of the initiation and completion of patient enrollment and treatment in our or our partners' clinical trials;
- the possibility of delays in the collection of clinical trial data and the uncertainty of the timing of the analyses of our clinical trial data after these trials have been initiated and completed;
- our potential inability to obtain additional funding and resources for our development activities on acceptable terms, if at all, including, but not limited to, our potential inability to obtain or retain partners to assist in the design, management, conduct and funding of clinical trials;
- failure by our clinical trial sites, clinical research organizations, clinical manufacturing organizations and other third parties supporting our or our partners' clinical trials to fulfill their obligations or otherwise perform as expected;
- delays or additional costs in manufacturing of our drug candidates for clinical trial use, including developing appropriate formulations of our drug candidates;
- the uncertainty of clinical trial results, including variability in patient response;
- the uncertainty of obtaining FDA or other foreign regulatory agency approval required for the clinical investigation of our drug candidates;
- the uncertainty related to the development of commercial scale manufacturing processes and qualification of a commercial scale manufacturing facility;
- the possibility that results from non-clinical studies may adversely impact the timing or further development of our drug candidates; and
- possible delays in the characterization, formulation and manufacture of drug candidates and other compounds.

If we fail to complete the development of any of our drug candidates in a timely manner, it could have a material adverse effect on our operations, financial position and liquidity. In addition, any failure by us or our partners to obtain, or any delay in obtaining, regulatory approvals for our drug candidates could have a material adverse effect on our results of operations. A further discussion of the risks and uncertainties associated with completing our programs as planned, or at all, and certain consequences of failing to do so are discussed further in the risk factors entitled "We will need substantial additional capital in the future to sufficiently fund our operations," "We have never generated, and may never generate, revenues from commercial sales of our drugs and we may not have drugs to market for at least several years, if ever," "Clinical trials may fail to demonstrate the desired safety and efficacy of our drug candidates, which could prevent or significantly delay completion of clinical development and regulatory approval" and "Clinical trials are expensive, time-consuming and subject to delay," and other risk factors.

Revenues

Our current revenue sources are limited, and we do not expect to generate any revenue from product sales for several years, if at all. We have recognized revenues from our strategic alliances with Amgen, Astellas, and MyoKardia, Inc. ("MyoKardia") and grant revenues from The ALS Association (the "ALSA") and the National Institute of Neurological Disorders and Strokes ("NINDS").

The following table summarizes the sources of our revenue for the years ended December 31, 2015, 2014 and 2013:

	Years Ended December 31,		
	2015	2014	2013
Astellas			
License revenues	$13,918	$ 9,836	$ 3,852
Research and development revenues	12,184	32,391	6,415
Total Revenues from Astellas	26,102	42,227	10,267
Amgen			
License revenues	—	—	$17,230
Research and development revenues	2,481	4,538	2,019
Total Revenues from Amgen	2,481	4,538	19,249
MyoKardia			
Research and development revenues	—	100	1,024
ALSA Grant Revenue	75	—	—
NINDS Grant Revenue	—	—	69
Other Revenue	—	75	39
Total revenues	$28,658	$46,940	$30,648

Astellas

In June 2013, we and Astellas executed a license and collaboration agreement (the "Original Astellas Agreement"), that was amended in December 2014 (the "Astellas Agreement Amendment.")

Refer to Note 7, "Related Parties and Related Party Transactions" in the Notes to Consolidated Financial Statements for further details regarding this collaboration agreement.

In July 2013, we received an upfront payment of $16.0 million in connection with the execution of the Original Astellas Agreement, establishing a collaboration directed to the research and development of skeletal muscle activators including CK-2127107 for potential application in non-neuromuscular indications associated with muscle weakness. This agreement provided for us to potentially receive over $24.0 million in reimbursement of sponsored research and development activities during the initial two years of the collaboration and for research and early and late stage development milestone payments based on various research and clinical milestones. We determined the license and the research and development services relating to the Original Astellas Agreement are a single unit of accounting as the license was determined to not have stand-alone value. Accordingly, we are recognizing this revenue using the proportional performance model. During 2014, Revenue from reimbursement of research and development activities also includes $2.0 million in research and development milestone fees and $15.0 million in milestone fees in connection with the decision made by Astellas to advance CK-2127107 into Phase 2 clinical development.

In January 2015, we received an upfront license fee payment of $30.0 million in connection with the execution of the Amended Astellas Agreement. Also, in conjunction with the execution of the Amended Astellas Agreement, we entered into a common stock purchase agreement pursuant to which we sold 2,040,816 shares of our common stock to Astellas at a price per share of $4.90. The aggregate purchase price of $10.0 million was received in December 2014. We determined the fair value of the stock issued to Astellas to be $9.1 million. The $0.9 million excess of cash received over fair value of was deferred and will be recognized as revenue as services are performed over approximately 24 months. Pursuant to this agreement, Astellas agreed to certain trading and other restrictions with respect to our common stock. We determined that the license and the research and development services relating to the Amended Astellas Agreement are a single unit of accounting as the license was determined to not have stand-alone value. Accordingly, we are recognizing this revenue using the proportional performance model over the initial research term of the Amended Astellas Agreement.

Concurrently with the execution of the Amended Astellas Agreement and related common stock purchase agreement, Cytokinetics received $15.0 million as a milestone payment relating to Astellas' decision to advance CK-2127107 into Phase 2 clinical development. Cytokinetics is also eligible to potentially receive over $20.0 million in reimbursement of sponsored research and development activities during the two years of the collaboration following the execution of the Amended Astellas Agreement.

Under the Amended Astellas Agreement, additional research and early and late state development milestone payments which are based on various research and clinical milestones, including the initiation of certain clinical studies, the submission for approval of a drug candidate to certain regulatory authorities for marketing approval and the commercial launch of collaboration products could total over $600.0 million, including up to $95.0 million relating to CK-2127107 in non-neuromuscular indications, and over $100.0 million related to CK-2127107 in each of SMA and other neuromuscular indications. Additionally, $200.0 million in commercial milestones could be received under the Amended Astellas Agreement provided certain sales targets are met. Due to the nature of drug development, including the inherent risk of development and approval of drug candidates by regulatory authorities, it is not possible to estimate if and when these milestone payments could become due.

In the event Astellas commercializes any collaboration products, the Company will receive royalties on sales of such collaboration products, including royalties ranging from the high single digits to the high teens on sales of products containing CK-2127107. Cytokinetics also holds an option to co-fund certain development costs for CK-2127107 and other compounds in exchange for increased milestone payments and royalties; such royalties may increase under certain scenarios to exceed twenty percent. Under the Amended Astellas Agreement, Cytokinetics retains an option to co-promote collaboration products containing fast skeletal muscle activators for neuromuscular indications in the U.S., Canada and Europe, in addition to its option to co-promote other collaboration products in the U.S. and Canada as provided for in the Original Astellas Agreement. Astellas will reimburse Cytokinetics for certain expenses associated with its co-promotion activities. The Amended Astellas Agreement also provides for Cytokinetics to lead certain activities relating to the commercialization of collaboration products for neuromuscular indications in the U.S., Canada and Europe under particular scenarios.

Amgen

In June 2013, we and Amgen executed an amendment (the "Amgen Agreement Amendment") to the Amgen Agreement to include Japan, resulting in a worldwide collaboration.

Refer to Note 7, "Related Parties and Related Party Transactions" in the Notes to Consolidated Financial Statements for further details regarding this collaboration agreement.

Under the terms of the Amgen Agreement Amendment, we received a non-refundable upfront license fee of $15.0 million in June 2013. In conjunction with the Amgen Agreement Amendment, we also entered into a common stock purchase agreement which provided for the sale of 1,404,100 shares of our common stock to Amgen at a price per share of $7.12 and an aggregate purchase price of $10.0 million, which was received in June 2013. Pursuant to this agreement, Amgen agreed to certain trading and other restrictions with respect to our common stock. Under the Amgen Agreement Amendment, we conducted a Phase 1 pharmacokinetic study intended to support inclusion of Japan in a potential Phase 3 clinical development program and potential global registration dossier for omecamtiv mecarbil. Amgen reimbursed us for the costs of this study. In addition, we are eligible to receive additional pre-commercialization milestone payments relating to the development of omecamtiv mecarbil in Japan of up to $50.0 million, and royalties on sales of omecamtiv mecarbil in Japan. In the fourth quarter of 2013, we determined that all conditions necessary for revenue recognition of the non-refundable upfront license fee under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 605-10 had been met and accordingly, in the fourth quarter of 2013, we recognized a total of $17.2 million in license revenue attributable to the Amgen Agreement Amendment.

We have received reimbursements from Amgen for certain research and development activities during 2015, 2014 and 2013, which we recorded as revenue as the related expenses were incurred. We may be eligible to

receive further reimbursements from Amgen for certain research and development activities, which we will record as revenue if and when the related expenses are incurred. We record amounts received in advance of performance as deferred revenue. Revenues related to the reimbursement of FTEs were based on negotiated rates intended to approximate the costs for our FTEs.

Under the Amgen Agreement, as amended, the Company is eligible to receive over $350.0 million in development milestone payments which are based on various clinical milestones, including the initiation of certain clinical studies, the submission of a drug candidate to certain regulatory authorities for marketing approval and the receipt of such approvals. Additionally, the Company is eligible to receive up to $300.0 million in commercial milestone payments provided certain sales targets are met. Due to the nature of drug development, including the inherent risk of development and approval of drug candidates by regulatory authorities, it is not possible to estimate if and when these milestone payments would become due. The achievement of each of these milestones is dependent solely upon the results of Amgen's development and commercialization activities and therefore none of these milestones was deemed to be substantive. During the years ended December 31, 2015, 2014 and 2013, the Company recognized no revenue for milestones achieved under the Amgen Agreement.

MyoKardia

In August 2012, we entered into a collaboration agreement with MyoKardia. Under an agreed research plan, scientists from MyoKardia and our FTEs conducted research focused on small molecule therapeutics that inhibit cardiac sarcomere proteins. We provided MyoKardia access to certain research facilities, and provided FTEs and other resources at agreed reimbursement rates that approximated our costs. We were the primary obligor in the collaboration arrangement, and accordingly, we recorded expense reimbursements from MyoKardia as research and development revenue. The research plan ended as planned in August 2013.

NINDS Grant

In July 2010 and in September 2012, the NINDS awarded us grants to support research and development of tirasemtiv directed to the potential treatment for myasthenia gravis for a period of up to three years. The grants were completed in June of 2013.

ALSA Grant

In July 2015, we were awarded a $1.5 million grant from The ALS Association (the "ALSA Grant") to support the conduct of VITALITY-ALS as well as the collection of clinical data and plasma samples from patients in VITALITY-ALS in order to help advance the discovery of potentially useful biomarkers in ALS. The grant provides funding for collaboration among Cytokinetics, The ALS Association and the Barrow Neurological Institute to enable plasma samples collected from patients enrolled in VITALITY-ALS to be added to The Northeastern ALS Consortium (NEALS) Repository, a resource for the academic research community to identify biomarkers that may help to assess disease progression and underlying disease mechanisms in ALS. On August 28, 2015, Cytokinetics achieved its first milestone under the ALSA Grant which triggered a payment of $0.5 million in accordance with the ALSA Grant. We recorded $0.1 million as grant revenue as qualified expenses were incurred and approved by management. At December 31, 2015, we had $0.4 million of deferred revenue under the ALSA Grant, reflecting the unrecognized portion of the grant revenue.

Because a substantial portion of our revenues for the foreseeable future will depend on achieving development and other pre-commercialization milestones under our strategic alliances with Amgen and Astellas, our results of operations may vary substantially from year to year.

If one or more of our drug candidates is approved for sale as a drug, we expect that our future revenues will most likely be derived from royalties on sales from drugs licensed to Amgen and Astellas under our respective

strategic alliances and from those licensed to future partners, and from direct sales of our drugs. We retain a product-by-product option to co-fund certain Phase 3 development activities under the Amgen Agreement, thereby potentially increasing our royalties and affording us co-promotion rights in North America. If we exercise our co-promotion rights under the Amgen Agreement, we are entitled to receive reimbursement for certain sales force costs we incur in support of our commercial activities. Under the Amended Astellas Agreement, we retain an option to co-promote collaboration products containing fast skeletal muscle activators for neuromuscular indications in the U.S., Canada and Europe, in addition to our option to co-promote other collaboration products in the U.S. and Canada as provided for in the Original Astellas Agreement. Astellas will reimburse us for certain expenses associated with our co-promotion activities. The Amended Astellas Agreement also provides for us to lead certain activities relating to the commercialization of collaboration products for neuromuscular indications in the U.S., Canada and Europe under particular scenarios.

Research and Development

We incur research and development expenses associated with both partnered and our own research activities. We expect to incur research and development expenses for the clinical development of tirasemtiv. We expect to incur research and development expenses for CK-2127107 in accordance with agreed upon research and development plans with Astellas. We expect to incur research and development expenses for omecamtiv mecarbil and other next-generation compounds in our cardiac muscle contractility program in accordance with agreed upon research and development plans with Amgen.

Research and development expenses related to any development and commercialization activities we elect to fund consist primarily of employee compensation, supplies and materials, costs for consultants and contract research and manufacturing, facilities costs and depreciation of equipment.

General and Administrative Expenses

General and administrative expenses consist primarily of compensation for employees in executive and administrative functions, including, but not limited to, finance, human resources, legal, business and commercial development and strategic planning. Other significant costs include facilities costs, consulting costs and professional fees for accounting and legal services, including legal services associated with obtaining and maintaining patents and regulatory compliance.

Stock Compensation

The following table summarizes stock-based compensation related to stock options, restricted stock awards, restricted stock units, and employee stock purchases for 2015, 2014 and 2013 (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Research and development	$1,828	$1,361	$1,538
General and administrative	2,739	1,969	2,059
Stock-based compensation included in operating expenses	$4,567	$3,330	$3,597

As of December 31, 2015, there was $7.7 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted-average period of 2.50 years and $4.8 million of unrecognized compensation cost related to unvested restricted stock units, including the performance stock units (PSU's), which is expected to be recognized over a weighted-average period of 2.12 years.

Income Taxes

We account for income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce the deferred tax assets to the amounts expected to be realized. We did not record an income tax provision in the years ended December 31, 2015, 2014 or 2013 because we had a net taxable loss in these periods.

Based upon the weight of available evidence, which includes our historical operating performance, reported cumulative net losses since inception, expected future losses, and difficulty in accurately forecasting our future results, we maintained a full valuation allowance on the net deferred tax assets as of December 31, 2015, 2014 and 2013. The valuation allowance was determined pursuant to the accounting guidance for income taxes, which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. We intend to maintain a full valuation allowance on the U.S. deferred tax assets until sufficient positive evidence exists to support reversal of the valuation allowance. The valuation allowance increased by $13.9 million in 2015, $1.0 million in 2014 and $13.7 million in 2013.

We also follow the accounting guidance that defines the threshold for recognizing the benefits of tax return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authorities based solely on the technical merits of the position. If the recognition threshold is met, the tax benefit is measured and recognized as the largest amount of tax benefit that, in our judgment, is greater than 50% likely to be realized. Historically, we have filed income tax returns with the federal Internal Revenue Service ("IRS") and the state of California. For jurisdictions in which tax filings are made, we are subject to income tax examination for all fiscal years since inception. In general, the statute of limitations for tax liabilities for these years remains open for the purpose of adjusting the amounts of the losses and credits carried forward from those years.

Interest accrued related to unrecognized tax benefits and penalties was zero for 2015, 2014 and 2013. We account for interest related to unrecognized tax benefits and penalties by classifying both as income tax expense in the financial statements in accordance with the accounting guidance for uncertainty in income taxes. We do not expect our unrecognized tax benefits to change materially over the next twelve months.

In general, under Section 382 of the Internal Revenue Code ("Section 382"), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses ("NOLs") and tax credits to offset future taxable income. We have performed a Section 382 analysis and do not believe that we have experienced an ownership change since 2006. A portion of our existing NOLs and tax credits are subject to limitations arising from previous ownership changes. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 and result in additional limitations.

Results of Operations

Years ended December 31, 2015, 2014 and 2013

Revenues

	Years Ended December 31,			Increase (Decrease)	
	2015	2014	2013	2015	2014
			(In millions)		
Research and development revenues from related parties	$14.7	$19.5	$ 2.0	$ (4.8)	$ 17.5
Research and development, grant and other revenues	0.1	17.6	7.5	(17.5)	10.1
License revenues from related parties	13.9	—	17.2	13.9	(17.2)
License revenues	—	9.8	3.9	(9.8)	5.9
Total revenues	$28.7	$46.9	$30.6	$(18.2)	$ 16.3

Research and development revenues from related parties refers to research and development revenues from our strategic alliances with Astellas and Amgen. Revenues from Astellas, which became a related party in December 2014, were $12.2 million and $15.0 million for years ended December 31, 2015 and 2014, respectively, and consisted of reimbursements of internal costs for certain full-time employee equivalents, and other research and development expenses. Revenues from Astellas in 2014 consisted of $15.0 million in milestone revenues. All research and development revenues from Astellas, prior to it becoming a related party are classified in research and development, grant and other revenues. Revenues from Amgen were $2.5 million, $4.5 million and $2.0 million in 2015, 2014 and 2013, respectively. Revenues from Amgen in 2015, 2014 and 2013 consisted of reimbursement of internal costs of certain full-time employee equivalents, and recognition of allocated consideration relating to the Amgen Agreement Amendment.

Research and development, grant and other revenues in 2015 consisted of $0.1 million of research and development revenues from our collaboration with ALSA. Research and development, grant and other revenues in 2015 and 2014 consisted primarily of revenues from our strategic alliance with Astellas, prior to becoming a related party in December 2014. Research and development, grant and other revenues in 2014 consisted primarily of $15.4 million of research and development reimbursement revenues and $2.0 million in milestone revenues from our collaboration with Astellas, and $0.1 million in revenue from our collaboration with MyoKardia. Research and development, grant and other revenues in 2013 consisted primarily of $6.4 million of research program reimbursement revenues from our collaboration with Astellas, and $1.0 million in revenue from our collaboration with MyoKardia.

License revenues from related parties refers to license revenues from our strategic alliances with Astellas and Amgen. License revenues from Astellas, which became a related party in December 2014, were $13.9 million in 2015 and consisted of the recognition of a portion of the $16.0 million upfront license fee received from Astellas in July 2013, and the recognition of a portion of the $30.0 million upfront license fee received from Astellas in January 2015. Both upfront license fees were recognized using the proportional performance model. License revenues from Amgen were $17.2 million in 2013 and included the recognition of an upfront license fee of $15.0 million, along with additional license revenues of $2.2 million, resulting from the allocation of a portion of the excess of the cash received over the fair value of the common stock issued contemporaneously to Amgen upon execution of the license. Under the Amgen Agreement Amendment, we sold 1,404,100 shares of our common stock to Amgen for $10.0 million. We determined the fair value of the stock issued to Amgen to be $7.5 million. A portion of the excess of cash received over fair value of $2.5 million was also allocated to the services performed and was deferred and was recognized as revenue as services were performed.

License revenues refers to license revenues from our collaboration with Astellas, prior to it becoming a related party in December 2014. License revenues from Astellas included $9.8 and $3.9 million in 2014 and

2013, respectively, of the $16.0 million upfront license fee received from Astellas in July 2013 in connection with the execution of the Original Astellas Agreement. We recognized this revenue over the term of the research and development services using the proportional performance model.

Research and development expenses

	Years Ended December 31,			Increase (Decrease)	
	2015	2014	2013	2015	2014
			(In millions)		
Research and development expenses	$46.4	$44.4	$49.5	$2.0	$(5.1)

The increase in research and development expenses in 2015 compared to 2014 was primarily due to an increase of $2.0 million in outsourced preclinical costs, an increase of $1.8 million in personnel related expenses due to increased headcount, and an increase of $0.4 million in lab expenses, partially offset by a decrease of $2.1 million in outsourced clinical costs associated with the completion of BENEFIT-ALS in the second quarter of 2014. The decrease in research and development expenses in 2014 compared to 2013 was primarily due to decreased spending of $8.2 million for outsourced clinical and preclinical costs mainly due to the completion of the BENEFIT-ALS clinical trial earlier in 2014, partially offset by increased spending of $2.6 million in personnel-related costs due to increased headcount.

The following presents our research and development expenses by program:

	Years Ended December 31,			Increase (Decrease)	
	2015	2014	2013	2015	2014
			(In millions)		
Cardiac muscle contractility	$ 5.8	$ 7.4	$ 3.4	$(1.6)	$ 4.0
Skeletal muscle contractility	36.3	32.9	40.8	3.4	(7.9)
Smooth muscle contractility	0.2	—	0.2	0.2	(0.2)
All other research programs	4.1	4.1	5.1	—	(1.0)
Total research and development expenses	$46.4	$44.4	$49.5	$ 2.0	$(5.1)

From a program perspective, the $2.0 million increase in research and development spending in 2015 compared to 2014 was primarily due to increased spending of $3.4 million for our skeletal muscle contractility program, which included our skeletal muscle contractility program for tirasemtiv for the treatment of ALS, and the clinical program for CK-2127107 under our collaboration with Astellas, and a $0.2 million increase in our other research and preclinical programs, partially offset by decreased spending of $1.6 million for our cardiac muscle contractility program under our collaboration with Amgen. The $5.1 million decrease in research and development spending in 2014 compared to 2013 was primarily due to lower spending for our skeletal muscle contractility program, partially offset by increased spending for our cardiac muscle contractility program.

Clinical development timelines, the likelihood of success and total completion costs vary significantly for each drug candidate and are difficult to estimate. We anticipate that we will determine on an ongoing basis which research and development programs to pursue and how much funding to direct to each program, taking into account the scientific and clinical success of each drug candidate. The lengthy process of seeking regulatory approvals and subsequent compliance with applicable regulations requires the expenditure of substantial resources. Any failure by us to obtain and maintain, or any delay in obtaining, regulatory approvals could cause our research and development expenditures to increase and, in turn, could have a material adverse effect on our results of operations.

We expect our research and development expenditures to increase significantly in 2016 compared to 2015. We expect to continue the Phase 3 clinical development of our drug candidate tirasemtiv for the potential

treatment of ALS. Under our strategic alliance with Astellas, we expect to continue development of our drug candidate CK-2127107 for the potential treatment of SMA and potentially other diseases and medical conditions associated with muscle weakness or wasting. Under our strategic alliance with Amgen, we expect to continue development of our drug candidate omecamtiv mecarbil for the potential treatment of heart failure.

General and administrative expenses

	Years Ended December 31,			Increase (Decrease)	
	2015	2014	2013	2015	2014
			(In millions)		
General and administrative expenses	$19.7	$17.3	$15.1	$2.4	$2.2

General and administrative expenses increased $2.4 million in 2015 compared to 2014 was primarily due to increased spending of $1.4 million for personnel-related costs due to increased headcount and increased spending of $0.8 million for outside services mainly related to commercial development. The increase of $2.2 million in 2014 compared to 2013 was primarily due to increased spending of $0.9 million for personnel-related costs due to increased headcount, and $0.8 million for outside services mainly related to commercial development and market access assessment activities.

We expect that general and administrative expenses in 2016 will increase significantly compared to 2015, mainly due to increased headcount.

Interest and Other, net

Components of Interest and Other Income (Expense), net are as follows:

	Years Ended December 31,			Increase (Decrease)	
	2015	2014	2013	2015	2014
			(In millions)		
Interest income and other income	$ 0.2	$ 0.1	$ 0.2	$ 0.1	$(0.1)
Interest expense and other expense	(0.3)	—	—	(0.3)	—
Interest and Other Income (Expense), net	$ (0.1)	$ 0.1	$ 0.2	$(0.2)	$(0.1)

Interest income and other income consisted primarily of interest income generated from our cash, cash equivalents and investments. Interest income and other income in 2013 also included net gains realized upon disposal of equipment. Interest expense and other expense in 2015 relate primarily to long term debt obligations.

Liquidity and Capital Resources

From August 5, 1997, our date of inception, through December 31, 2015, we funded our operations through the sale of equity securities, non-equity payments from collaborators, long term debt, capital equipment financings, grants and interest income from investments. Due to our substantial research and development expenditures, we have generated significant operating losses since our inception. Our expenditures are primarily related to research and development activities. As of December 31, 2015, we had available cash, cash equivalents and investments of $111.6 million.

Equity Securities

We have received net proceeds from the sale of equity securities of $498.1 million from August 5, 1997, the date of our inception, through December 31, 2015, excluding sales of equity to GlaxoSmithKline (“GSK”),

Amgen and Astellas. Included in these proceeds are $94.0 million received upon closing of the initial public offering of our common stock in May 2004. In connection with execution of our collaboration and license agreement with GSK in 2001, GSK made a $14.0 million equity investment in us. GSK made additional equity investments in us in 2003 and 2004 of $3.0 million and $7.0 million, respectively. In January 2007, in connection with the execution of the Amgen Agreement, we received net proceeds of $32.9 million from a stock purchase agreement with Amgen. In June 2013, in conjunction with the Amgen Agreement Amendment, we sold 1,404,100 shares of common stock to Amgen for an aggregate purchase price of $10.0 million. In December 2014, in connection with the Amended Astellas Agreement, we sold 2,040,816 shares of common stock to Astellas for an aggregate purchase price of $10.0 million.

Collaboration Partners

On a cumulative basis through December 31, 2015, we have received $132.8 million in non-equity payments from Amgen, $89.2 million in non-equity payments from Astellas, and $54.5 million in non-equity payments from GSK, in each case related to our strategic alliances.

Amgen Agreement Amendment

In June 2013, we entered into the Amgen Agreement Amendment, which expanded our strategic alliance to include Japan (see Note 7, "Related Parties and Related Party Transactions" in the Notes to Consolidated Financial Statements). Under the terms of the Amgen Agreement Amendment, we received a non-refundable upfront license fee of $15.0 million in June 2013. In conjunction with the Amgen Agreement Amendment, we also entered into a common stock purchase agreement pursuant to which we sold 1,404,100 shares of our common stock to Amgen at a price per share of $7.12. The aggregate purchase price of $10.0 million was received in June 2013. We determined the fair value of the stock issued to Amgen to be $7.5 million. The excess of cash received over fair value of $2.5 million was deferred and was recognized as revenue as services were performed over approximately 12 months.

Under the Amgen Agreement as amended, we are eligible for potential pre-commercialization and commercialization milestone payments of over $650.0 million in the aggregate on omecamtiv mecarbil and other potential products arising from research under the collaboration, and royalties that escalate based on increasing levels of annual net sales of products commercialized under the agreement.

Amgen and the Company agreed to further extend the term of the research program in 2015. Under the amended Amgen Agreement, we are entitled to receive reimbursements of internal costs for certain full-time employee equivalents during 2015, as well as potential additional milestone payments related to the research activities.

Original Astellas Agreement

In June 2013, we entered into the Original Astellas Agreement (see Note 7, "Related Parties and Related Party Transactions" in the Notes to Consolidated Financial Statements). In July 2013, we received an upfront non-refundable license payment of $16.0 million in connection with the execution of the Original Astellas Agreement. Pursuant to that agreement. we were eligible to potentially receive over $24.0 million in reimbursement of sponsored research and development activities during the initial two years of the collaboration. In addition, the agreement also provided for payments for the achievement of pre-specified milestones relating to the joint research and development program. In 2015 and 2014, we recognized revenue of zero dollars and $17.0 million, respectively relating to milestones under the Original Astellas Agreement.

Amended Astellas Agreement

In December 2014, we entered into the Amended Astellas Agreement, which superseded the Original Astellas Agreement (see Note 7, "Related Parties and Related Party Transactions" in the Notes to Consolidated

Financial Statements). Under the terms of the Amended Astellas Agreement, we received a non-refundable upfront license fee of $30.0 million in January 2015. In conjunction with the Amended Astellas Agreement, we also entered into a common stock purchase agreement pursuant to which we sold 2,040,816 shares common stock to Astellas at a price per share of $4.90. The aggregate purchase price of $10.0 million was received in December 2014. We determined the fair value of the stock issued to Astellas to be $9.1 million. The excess of cash received over fair value of $0.9 million was deferred and will be recognized as revenue as services are performed over approximately 24 months.

We are eligible to potentially receive over $20.0 million in reimbursement of sponsored research and development activities during the two years of the collaboration following the execution of the Amended Astellas Agreement. In addition, we may also receive payments for the achievement of pre-specified milestones relating to the Amended Astellas Agreement.

Based on the achievement of pre-specified criteria, Cytokinetics may receive over $600.0 million in milestone payments relating to the development and commercial launch of collaboration products, including up to $112.0 million (of which Cytokinetics has now received $17.0 million) relating to early development of CK-2127107 and for later-stage development and commercial launch milestones for CK-2127107 in non-neuromuscular indications, and over $100.0 million in development and commercial launch milestones for CK-2127107 in each of SMA and other neuromuscular indications. Cytokinetics may also receive up to $200.0 million in payments for achievement of pre-specified sales milestones related to net sales of all collaboration products under the Amended Astellas Agreement. If Astellas commercializes any collaboration products, Cytokinetics will also receive royalties on sales of such collaboration products, including royalties ranging from the high single digits to the high teens on sales of products containing CK-2127107. Cytokinetics also holds an option to co-fund certain development costs for CK-2127107 and other compounds in exchange for increased milestone payments and royalties; such royalties may increase under certain scenarios to exceed twenty percent. In addition to the foregoing development, commercial launch and sales milestones, Cytokinetics may also receive payments for the achievement of pre-specified milestones relating to the joint research program.

April 2011 Private Offering

In April 2011, we entered into a securities purchase agreement with Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited (collectively, "Deerfield"). In April 2011, pursuant to the agreement, we issued to Deerfield (i) 833,333 shares of common stock for a purchase price of $1.50 per share, (ii) 8,070 shares of Series A convertible preferred stock (the "Series A Preferred Stock") for a purchase price of $1,500.00 per share, and (iii) warrants to purchase 1,114,168 shares of our common stock at an initial exercise price of $9.90 per share, for net proceeds of $19.9 million after issuance costs of $0.2 million. The offering was made pursuant to a shelf registration statement that we filed with the SEC on November 10, 2008, which became effective on November 19, 2008 (File No. 333-155259).

On September 26, 2012, 8,070 shares of Series A Preferred Stock were converted into 1,345,000 shares of our common stock. The conversion was in accordance with the terms of the agreement with Deerfield under which the Series A Preferred Stock was issued in 2011. The 1,114,168 warrants issued in 2011, expired unexercised on April 20, 2015.

MLV

On June 10, 2011, we entered into an At-The-Market Issuance Sales Agreement (the "MLV Agreement") with McNicoll, Lewis & Vlak LLC ("MLV"), pursuant to which we issued and sold, through January 2014, 2,397,278 shares for total net proceeds of approximately $15.2 million. Sales of our common stock through MLV in 2014 were 364,103 shares for net proceeds of approximately $2.4 million. No shares remain available to us for sale through the MLV Agreement.

June 2012 Public Offerings

On June 20, 2012, we entered into underwriting agreements for two separate, concurrent offerings of our securities (the "June 2012 Public Offerings"). On June 25, 2012, pursuant to the underwriting agreements, in aggregate we issued to various investors (i) 9,320,176 shares of common stock for a purchase price of $4.56 per share, (ii) 23,026 shares of Series B convertible preferred stock (the "Series B Preferred Stock") for a purchase price of $760.00 per share, and (iii) warrants to purchase 7,894,704 shares of our common stock at an exercise price of $5.28 per share, for aggregate gross proceeds of approximately $60.0 million. After issuance costs of approximately $4.0 million, the net proceeds from the June 2012 Public Offerings were approximately $56.0 million.

The warrants issued in the June 2012 Public Offerings became exercisable upon issuance and will remain exercisable until June 25, 2017. The warrant holders are prohibited from exercising the warrants and obtaining shares of common stock if, as a result of such exercise, the holder and its affiliates would own more than 9.98% of the total number of shares of our common stock then issued and outstanding. We valued the warrants as of the date of issuance at $16.2 million using the Black-Scholes option pricing model and the following assumptions: a contractual term of five years, a risk-free interest rate of 0.73%, volatility of 76%, and the fair value of our common stock on the issuance date of $3.78. In February 2013, warrants to purchase 1,000 shares of our common stock at an exercise price of $5.28 per share were exercised in accordance with the June 2012 Public Offerings underwriting agreements. In April 2013, we issued 358,460 shares of common stock related to cashless exercise of warrants. As of December 31, 2015, warrants to purchase 5,641,237 shares of our common stock were outstanding and exercisable.

In the first quarter of 2013, 4,000 shares of Series B Preferred Stock were converted into 666,667 shares of our common stock. In the second quarter of 2013, 15,026 shares of Series B Preferred Stock were converted into 2,504,333 shares of our common stock. In July, 2013, 4,000 shares of Series B Preferred Stock, which represented all remaining shares of Series B Preferred Stock, were converted into 666,681 shares of our common stock. The conversions were in accordance with the June 2012 Public Offerings underwriting agreements.

The June 2012 Public Offerings were made pursuant to a shelf registration statement that we filed with the SEC on November 25, 2011, which became effective on December 8, 2011 (File No. 333-178189) and a supplemental shelf registration statement on Form S-3MEF that we filed with the SEC on June 20, 2012, which became effective on June 20, 2012 (File No. 333-182226). The closing of the June 2012 Public Offerings took place on June 25, 2012.

The fair value of the common stock into which the Series B Preferred Stock was convertible exceeded the allocated purchase price of the Series B Preferred Stock by $1.3 million on the date of issuance, resulting in a beneficial conversion feature. We recognized the beneficial conversion feature as a one-time, non-cash, deemed dividend to the holders of Series B Preferred Stock on the date of issuance, which is the date the stock first became convertible.

February 2014 Public Offering

On February 25, 2014, we closed an underwritten public offering for the issuance and sale of 5,031,250 shares of our common stock. The gross proceeds from this public offering were $40.3 million and net proceeds were $37.5 million, after deducting the underwriting discount and offering expenses.

Cantor Fitzgerald

On September 4, 2015, we entered into a $40.0 million Controlled Equity Offering Sales Agreement ("CE Offering") with Cantor Fitzgerald & Co., pursuant to which we issue and sold, through December 31, 2015, 808,193 shares for total net proceeds of approximately $8.7 million. As of February 26, 2016, $31.3 million remains available to us under the September 2015 Registration Statement.

October 2015 Loan Agreement

On October 19, 2015, we entered into a loan and security agreement (the "Loan Agreement") with Oxford Finance LLC ("Oxford,") as the collateral agent and a lender, and Silicon Valley Bank ("SVB,") as a lender (Oxford and SVB collectively the "Lenders") to fund our working capital and other general corporate needs. As of December 31, 2015 we received $14.9 million from this loan and security agreement for Term A, net of issuance cost. Note 9, "Long-Term Debt" of the Notes to Consolidated Financial Statements for further details. In February 2016, we received an additional $14.9 million from this loan and security agreement for Term B, net of issuance cost. Note 16, "Subsequent Events" of the Notes to Consolidated Financial Statements for further details.

Sources and Uses of Cash

Our cash, cash equivalents and investments totaled $111.6 million at December 31, 2015, compared to $83.2 million at December 31, 2014. The increase of $28.4 million was primarily due to the receipt of $45.0 million from Astellas in January 2015, net proceeds received from the Loan Agreement of $14.9 million and net cash provided by operations. Cash received from Astellas in January 2015 was a payment of a non-refundable upfront license fee of $30.0 million and a milestone payment of $15.0 million.

Net cash provided by operating activities was $4.9 million in the year ended December 31, 2015 and was largely due to the receipt of $45.0 million from Astellas in January 2015, partially offset by cash used by operations due to the ongoing research and development activities. The net loss for the year ended December 31, 2015 included non-cash stock based compensation of $4.6 million. At December 31, 2015, deferred revenue of $20.9 million related primarily to the deferral of revenue for Astellas based on the proportional performance model. Net cash used in operating activities was $44.8 million in the year ended December 31, 2014 and was largely due to the ongoing research and development activities and recognition of deferred revenue for which payment had been received in prior periods. The net loss for the year ended December 31, 2014 included non-cash stock based compensation of $3.3 million. At December 31, 2014, deferred revenue of $33.6 million related largely to the deferral of revenue for Astellas based on the proportional performance model.

Net cash provided by investing activities of $16.1 million in the year ended December 31, 2015 was primarily due to proceeds from the maturity of investments of $132.2 million which exceeded purchases of investments by $16.6 million, partially offset by cash used by investing activities for purchases of property and equipment. Net cash used in investing activities of $4.0 million in the year ended December 31, 2014 was primarily due to purchases of investments, which exceeded proceeds from the maturity of investments by $2.9 million, and purchases of property and equipment.

Net cash provided by financing activities was $23.9 million in the year ended December 31, 2015 was primarily due to net proceeds from the Loan Agreement of $14.9 million, net proceeds pursuant to the CE Offering of $8.7 million, and net proceeds from issuances of restricted stock to employees and employee stock option exercises of $0.4 million. Net cash provided by financing activities was $48.9 million in the year ended December 31, 2014 and primarily consisted of net proceeds of $37.5 million from the February 2014 public offering, net proceeds of $2.4 million from sales of our common stock pursuant to the MLV Agreement and proceeds of $9.1 million from the sale of common stock to Astellas.

Shelf Registration Statements.

In November 2013, we filed a shelf registration statement with the SEC, which was declared effective in December 2013 (the "December 2013 Shelf"). The December 2013 Shelf allows us to issue common stock and preferred stock, and/or warrants to purchase any of such securities with a total value of up to $150.0 million. As of February 26, 2016, $109.7 million remains available to us under the December 2013 Shelf. The specific terms of offerings, if any, under the December 2013 Shelf will be established at the time of such offerings.

In September 2015, we filed a registration statement on Form S-3 with the SEC, which was declared effective in September 2015 (the "September 2015 Registration Statement") in conjunction with a the CE Offering with Cantor Fitzgerald & Co. Pursuant to the terms of the CE Offering we may offer and sell, from time to time through Cantor Fitzgerald, shares of our common stock, having an aggregate offering price of up to $40.0 million. As of December 31, 2015, 808,193 shares of common stock were sold pursuant the CE Offering for total net proceeds of approximately $8.7 million. As of February 26, 2016, $31.3 million remains available to us under the September 2015 Registration Statement.

Contractual Obligations and Commitments

Our contractual obligations for the next five years and thereafter are as follows (in thousands):

	Payments Due by Period				
	2016	2017-2018	2019-2020	Beyond	Total
Long-term debt (1)	$ —	$ 6,251	$ 8,749	$ —	$15,000
Interest obligation on long-term debt(2)	$1,145	$ 2,006	$ 1,210	$ —	$ 4,361
Operating lease obligations(3)	$3,504	$ 5,486	$ —	$ —	$ 8,990
Total obligations	$4,649	$13,743	$ 9,959	$ —	$28,351

(1) For further discussion regarding long-term debt, see Note 9, "Long-Term Debt" of the Notes to Consolidated Financial Statements.

(2) Interest obligation on long-term debt has been calculated based on the interest rate applicable as of December 31, 2015.

(3) Our long-term commitment under operating lease relates to payments under our facility lease in South San Francisco, California, which expires in 2018.

In future periods, we expect to incur substantial costs as we continue to expand our research programs and related research and development activities. We plan to continue development of our fast skeletal muscle troponin activator tirasemtiv for the potential treatment of ALS. We plan to continue development of our fast skeletal muscle troponin activator CK-2127107 for the potential treatment of SMA and potentially other diseases and conditions related to skeletal muscle weakness or wasting and research of potential next-generation compounds as part of our strategic alliance with Astellas. We plan to continue to support the development of our cardiac muscle myosin activator omecamtiv mecarbil for the potential treatment of heart failure and the research of potential next-generation compounds as part of our strategic alliance with Amgen. We expect to incur significant research and development expenses as we advance the research and development of compounds from our other muscle biology programs through research to candidate selection.

Our future capital uses and requirements depend on numerous factors. These factors include, but are not limited to, the following:

- the initiation, progress, timing, scope and completion of preclinical research, non-clinical development and clinical trials for our drug candidates and other compounds;
- the time and costs involved in obtaining regulatory approvals;
- delays that may be caused by requirements of regulatory agencies;
- Amgen's decisions with regard to funding of development and commercialization of omecamtiv mecarbil or other compounds for the potential treatment of heart failure under our collaboration;
- Astellas' decisions with regard to funding of development and commercialization of CK-2127107 or other skeletal muscle activators under our collaboration;
- our level of funding for the development of current or future drug candidates;

- the number of drug candidates we pursue;
- the costs involved in filing and prosecuting patent applications and enforcing or defending patent claims;
- our ability to establish and maintain selected strategic alliances required for the development of drug candidates and commercialization of our potential drugs;
- our plans or ability to expand our drug development capabilities, including our capabilities to conduct clinical trials for our drug candidates;
- our plans or ability to engage third party manufacturers for our drug candidates and potential drugs;
- our plans or ability to build or access sales and marketing capabilities and to achieve market acceptance for potential drugs;
- the expansion and advancement of our research programs;
- the hiring of additional employees and consultants;
- the expansion of our facilities;
- the acquisition of technologies, products and other business opportunities that require financial commitments; and
- our revenues, if any, from successful development of our drug candidates and commercialization of potential drugs.

We have incurred an accumulated deficit of $534.7 million since inception and there can be no assurance that we will attain profitability. We are subject to risks common to clinical-stage companies including, but not limited to, development of new drug candidates, dependence on key personnel, and the ability to obtain additional capital as needed to fund our future plans. Our liquidity will be impaired if sufficient additional capital is not available on terms acceptable to us, if at all. To date, we have funded our operations primarily through sales of our common stock and convertible preferred stock, contract payments under our collaboration agreements, debt financing arrangements, grants and interest income. Until we achieve profitable operations, we intend to continue to fund operations through payments from strategic collaborations, additional sales of equity securities, grants and debt financings. We have never generated revenues from commercial sales of our drugs and may not have drugs to market for at least several years, if ever. Our success is dependent on our ability to obtain additional capital by entering into new strategic collaborations and/or through equity or debt financings, and ultimately on our and our collaborators' ability to successfully develop and market one or more of our drug candidates. We cannot be certain that sufficient funds will be available from such collaborators or financings when needed or on satisfactory terms. Additionally, there can be no assurance that any of drugs based on our drug candidates will be accepted in the marketplace or that any future products can be developed or manufactured at an acceptable cost. These factors could have a material adverse effect on our future financial results, financial position and cash flows.

Based on the current status of our development plans, we believe that our existing cash and cash equivalents, investments and interest earned on investments will be sufficient to meet our projected operating requirements for at least the next 12 months. If, at any time, our prospects for internally financing our research and development programs decline, we may decide to reduce research and development expenses by delaying, discontinuing or reducing our funding of development of one or more of our drug candidates or of other research and development programs. Alternatively, we might raise funds through strategic relationships, public or private financings or other arrangements. There can be no assurance that funding, if needed, will be available on attractive terms, or at all, or in accordance with our planned timelines. Furthermore, financing obtained through future strategic relationships may require us to forego certain commercialization and other rights to our drug candidates. Similarly, any additional equity financing may be dilutive to stockholders and debt financing, if available, may involve restrictive covenants. Our failure to raise capital as and when needed could have a negative impact on our financial condition and our ability to pursue our business strategy.

Off-balance Sheet Arrangements

We are not party to any off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Critical Accounting Policies and Estimates

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 accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses and related disclosure of contingent assets and liabilities. We review our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are described in more detail in the notes to our financial statements included in this Annual Report on Form 10-K, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our financial statements.

Investments

Available-for-sale investments. Our investments consist of U.S. Treasury securities, and money market funds. We designate all investments as available-for-sale. Therefore, they are reported at fair value, with unrealized gains and losses recorded in accumulated other comprehensive income. See Note 3, "Cash Equivalents and Investments" in the Notes to Consolidated Financial Statements for further detailed discussion. Investments with original maturities greater than three months and remaining maturities less than one year are classified as short-term investments. Investments with remaining maturities greater than one year are classified as long-term investments. The amortized cost of debt securities in this category is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization is included in interest income. Realized gains and losses and declines in value judged to be other-than-temporary, if any, on available-for-sale securities are included in other income or expense. Interest and dividends on securities classified as available-for-sale are included in Interest and Other, net.

Other-than-temporary impairment. All of our available-for-sale investments are subject to a periodic impairment review. We recognize an impairment charge when a decline in the fair value of our investments below the cost basis is judged to be other-than-temporary. Factors considered by management in assessing whether an other-than-temporary impairment has occurred include: the nature of the investment; whether the decline in fair value is attributable to specific adverse conditions affecting the investment; the financial condition of the investee; the severity and the duration of the impairment; and whether we have the intent and ability to hold the investment to maturity. When we determine that an other-than-temporary impairment has occurred, the investment is written down to its market value at the end of the period in which we determine that an other-than-temporary decline occurred.

Revenue Recognition

We recognize revenue when the following criteria have been met: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; the fee is fixed or determinable; and collectability is reasonably assured. Determination of whether persuasive evidence of an arrangement exists and whether delivery has occurred or services have been rendered are based on management's judgments regarding the fixed nature of the fee charged for research performed and milestones met, and the collectability of those fees. Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected.

Revenue under our license and collaboration arrangements is recognized based on the performance requirements of the contract. Research and development revenues, which are earned under agreements with third parties for agreed research and development activities, may include non-refundable license fees, research and development funding, cost reimbursements and contingent milestones and royalties. The Company's collaborations prior to January 1, 2011 with multiple elements were evaluated and divided into separate units of accounting if certain criteria are met, including whether the delivered element has stand-alone value to the customer and whether there was vendor-specific objective and reliable evidence ("VSOE") of the fair value of the undelivered items. The consideration the Company received was allocated among the separate units based on their respective fair values, and the applicable revenue recognition criteria were applied to each of the separate units. The consideration the Company received was combined and recognized as a single unit of accounting when criteria for separation were not met. On January 1, 2011, ASC Topic 605-25, *Revenue Recognition — Multiple-Element Arrangements* ("ASC 605-25") on the recognition of revenues for agreements with multiple deliverables became effective and applies to any agreements the Company entered into on or after January 1, 2011. Under this updated guidance, revenue is allocated to each element using a selling price hierarchy, where the selling price for an element is based on VSOE if available; third-party evidence ("TPE"), if available and VSOE is not available; or the best estimate of selling price, if neither VSOE nor TPE is available.

Upfront, non-refundable licensing payments are assessed to determine whether or not the licensee is able to obtain stand-alone value from the license. Where the license does not have stand-alone value, non-refundable license fees are recognized as revenue as we perform under the applicable agreement. Where the level of effort is relatively consistent over the performance period, we recognize total fixed or determined revenue on a straight-line basis over the estimated period of expected performance. Where the license has stand-alone value, we recognize total license revenue at the time all revenue recognition criteria have been met.

Also on January 1, 2011, ASC Topic 605-28, *Revenue Recognition — Milestone Method* ("ASC 605-28") became effective and established the milestone method as an acceptable method of revenue recognition for certain contingent event-based payments under research and development arrangements. Under the milestone method, a payment that is contingent upon the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is an event (i) that can be achieved based in whole or in part on either our performance or on the occurrence of a specific outcome resulting from our performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, and (iii) that would result in additional payments being due to us. The determination that a milestone is substantive is based on management's judgment and is made at the inception of the arrangement. Milestones are considered substantive when the consideration earned from the achievement of the milestone is (i) commensurate with either our performance to achieve the milestone or the enhancement of value of the item delivered as a result of a specific outcome resulting from our performance to achieve the milestone, (ii) relates solely to past performance and (iii) is reasonable relative to all deliverables and payment terms in the arrangement.

Other contingent event-based payments received for which payment is either contingent solely upon the passage of time or the results of a collaborative partner's performance are not considered milestones under ASC 605-28. Such payments will be recognized as revenue when all of the following criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been rendered, (iii) price is fixed or determinable, (iv) and collectability is reasonably assured.

For our collaborations entered into prior to January 1, 2011, we recognized and will continue to recognize milestone payments as revenue upon achievement of the milestone, provided the milestone payment was non-refundable, substantive effort and risk was involved in achieving the milestone and the amount of the milestone was reasonable in relation to the effort expended or risk associated with the achievement of the milestone. If these conditions were not met, we deferred the milestone payment and recognized it as revenue over the estimated period of performance under the contract as we completed our performance obligations. We have concluded that all of the future contingent milestone payments pursuant to our research and development

arrangements entered into prior to January 1, 2011 are not considered substantive as they are the results of a collaborative partner's performance. Therefore, they are not considered milestones under ASC 605-28.

For our collaborations and material modifications entered into after January 1, 2011, we account for milestone payments under the provisions of ASC 605-28. We consider an event to be a milestone if there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, if the event can only be achieved with our performance, and if the achievement of the event results in payment to us. If we determine a milestone is substantive, we recognize revenue when payment is earned and becomes payable. For a milestone to be considered substantive, it must be achieved with our performance, be reasonable relative to the terms of the arrangement and be commensurate with our effort to achieve the milestone or commensurate with the enhanced value of the delivered item(s) as a result of the milestone achievement. If we determine a milestone is not substantive, we defer the payment and recognize revenue over the estimated period of performance as we complete our performance obligations, if any.

Research and development revenues and cost reimbursements are based upon negotiated rates for our FTEs and actual out-of-pocket costs. FTE rates are negotiated rates that are based upon our costs, and which we believe approximate fair value. Any amounts received in advance of performance are recorded as deferred revenue. None of the revenues recognized to date are refundable if the relevant research effort is not successful. In revenue arrangements in which both parties make payments to each other, we evaluate the payments to determine whether payments made by us will be recognized as a reduction of revenue or as expense. Revenue we recognize may be reduced by payments made to the other party under the arrangement unless we receive a separate and identifiable benefit in exchange for the payments and we can reasonably estimate the fair value of the benefit received.

Funds received from third parties under grant arrangements are recorded as revenue if we are deemed to be the principal participant in the grant arrangement as the activities under the grant are part of our development programs. If we are not the principal participant, the grant funds are recorded as a reduction to research and development expense. Grant funds received are not refundable and are recognized when the related qualified research and development costs are incurred and when there is reasonable assurance that the funds will be received. Funds received in advance are recorded as deferred revenue.

Preclinical Study and Clinical Trial Accruals

A substantial portion of our preclinical studies and all of our clinical trials have been performed utilizing third-party contract research organizations ("CROs") and other vendors. For preclinical studies, the significant factors used in estimating accruals include the percentage of work completed to date and contract milestones achieved. For clinical trial expenses, the significant factors used in estimating accruals include the number of patients enrolled, duration of enrollment and percentage of work completed to date. We monitor patient enrollment levels and related activities to the extent possible through internal reviews, correspondence and status meetings with CROs and review of contractual terms. Our estimates are dependent on the timeliness and accuracy of data provided by our CROs and other vendors. If we have incomplete or inaccurate data, we may under- or overestimate activity levels associated with various studies or clinical trials at a given point in time. In this event, we could record adjustments to research and development expenses in future periods when the actual activity levels become known. No material adjustments to preclinical study and clinical trial expenses have been recognized to date.

Stock-Based Compensation

We apply the accounting guidance for stock compensation, which establishes the accounting for share-based payment awards made to employees and directors, including employee stock options and employee stock purchases. Under this guidance, stock-based compensation cost is measured at the grant date based on the calculated fair value of the award, and is recognized as an expense on a straight-line basis over the employee's requisite service period, generally the vesting period of the award.

Under the guidance for stock compensation for non-employees, we measure the fair value of the award each period until the award is fully vested. Compensation cost for restricted stock awards that contain performance conditions is based on the grant date fair value of the award and compensation expense is recorded over the implicit or explicit requisite service period based on management's best estimate as to whether it is probable that the shares awarded are expected to vest.

As required under the accounting rules, we review our valuation assumptions at each grant date and, as a result, from time to time we will likely change the valuation assumptions we use to value stock based awards granted in future periods. The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates at the time, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if conditions change and we use different assumptions, our stock-based compensation expense could be materially different in the future. In addition, we are required to estimate the expected forfeiture rate and recognize expense only for those shares expected to vest. If our actual forfeiture rate is materially different from our estimate, the stock-based compensation expense could be significantly different from what we have recorded in the current period.

Income Taxes

We account for income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce the deferred tax assets to the amounts expected to be realized. We did not record an income tax provision in the years ended December 31, 2015, 2014 or 2013 because we had a net taxable loss in these periods.

Based upon the weight of available evidence, which includes our historical operating performance, reported cumulative net losses since inception, expected future losses, and difficulty in accurately forecasting our future results, we maintained a full valuation allowance on the net deferred tax assets as of December 31, 2015, 2014 and 2013. The valuation allowance was determined pursuant to the accounting guidance for income taxes, which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. We intend to maintain a full valuation allowance on the U.S. deferred tax assets until sufficient positive evidence exists to support reversal of the valuation allowance. The valuation allowance increased by $13.9 million in 2015, $1.0 million in 2014 and $13.7 million in 2013.

We also follow the accounting guidance that defines the threshold for recognizing the benefits of tax return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authorities based solely on the technical merits of the position. If the recognition threshold is met, the tax benefit is measured and recognized as the largest amount of tax benefit that, in our judgment, is greater than 50% likely to be realized.

Interest accrued related to unrecognized tax benefits and penalties was zero for 2015, 2014 and 2013. We account for interest related to unrecognized tax benefits and penalties by classifying both as income tax expense in the financial statements in accordance with the accounting guidance for uncertainty in income taxes. We do not expect our unrecognized tax benefits to change materially over the next twelve months.

The significant jurisdictions in which we file income tax returns are the United States and the state of California. For jurisdictions in which tax filings are made, we are subject to income tax examination for all fiscal years since inception. The IRS's Large Business and International Division concluded its audit of the 2009 tax year with no material adjustments. However, in general, the statute of limitations for tax liabilities for these years remains open for the purpose of adjusting the amounts of the losses and credits carried forward from those years. We believe that we maintain adequate reserves for uncertain tax positions.

In general, under Section 382 of the Internal Revenue Code ("Section 382"), a corporation that undergoes an 'ownership change' is subject to limitations on its ability to utilize its pre-change net operating losses ("NOLs")

and tax credits to offset future taxable income. We have performed a Section 382 analysis and do not believe that we have experienced an ownership change since 2006. A portion of our existing NOLs and tax credits are subject to limitations arising from previous ownership changes. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 and result in additional limitations.

Recent Accounting Pronouncements

See "Recent Accounting Pronouncements" in Note 1, "Organization and Significant Accounting Policies" in the Notes to Consolidated Financial Statements for a discussion of recently adopted accounting pronouncements and accounting pronouncements not yet adopted, and their expected impact on our financial position and results of operations.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Interest Rate and Market Risk

Investments

Our exposure to market risk is limited to interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because the majority of our investments are in short-term debt securities. The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive without significantly increasing risk. We are exposed to the impact of interest rate changes and changes in the market values of our investments. Our interest income is sensitive to changes in the general level of U.S. interest rates. Our exposure to market rate risk for changes in interest rates relates primarily to our investment portfolio. We have not used derivative financial instruments in our investment portfolio. We invest the majority of our excess cash in U.S. Treasuries and, by policy, limit the amount of credit exposure in any one issuer and investment class, with the exception of obligations of the U.S. Treasury and federal agencies, for which there are no such limits. We protect and preserve our invested funds by attempting to limit default, market and reinvestment risk. Investments in both fixed-rate and floating-rate interest-earning instruments carry a degree of interest rate risk. Fixed-rate securities may have their fair market value adversely impacted due to a rise in interest rates, while floating-rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates. To minimize risk, we maintain our portfolio of cash and cash equivalents and short- and long-term investments in a variety of interest-bearing instruments, including U.S. government and agency securities, high grade municipal and U.S. bonds and money market funds. Our investment portfolio of short- and long-term investments is subject to interest rate risk, and will fall in value if market interest rates increase.

Our cash and cash equivalents are invested in highly liquid securities with maturities of three months or less at the time of purchase. Consequently, we do not consider our cash and cash equivalents to be subject to significant interest rate risk and have therefore excluded them from the table below. We do not have any foreign currency or derivative financial instruments.

The table below presents the principal amounts and weighted average interest rates by year of maturity for our investment portfolio (dollars in thousands):

	2016	Fair Value at December 31, 2015
Assets:		
Investments, Short Term	$46,366	$ 46,366
Average interest rate	0.20%	

Long Term Debt

Our long term debt bears interest at a fixed rate. At December 31, 2015, borrowings under the Loan Agreement totaled $14.6 million with weighted average interest rate of 7.5%.

Item 8. ***Financial Statements and Supplementary Data***

CYTOKINETICS, INCORPORATED
INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Cytokinetics, Incorporated:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of comprehensive loss, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Cytokinetics, Incorporated and its subsidiary at December 31, 2015 and December 31, 2014, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control — Integrated Framework 2013* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PRICEWATERHOUSECOOPERS LLP
San Jose, CA
March 3, 2016

CYTOKINETICS, INCORPORATED

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2015	2014
	(In thousands, except share and per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 65,076	$ 20,215
Short-term investments	46,366	63,013
Related party accounts receivable	12	46,646
Prepaid and other current assets	1,653	1,257
Total current assets	113,107	131,131
Property and equipment, net	1,751	1,637
Long-term investments	179	—
Other assets	200	200
Total assets	$ 115,237	$ 132,968
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,238	$ 1,361
Accrued liabilities	8,421	5,400
Deferred revenue, current	20,858	17,042
Short-term portion of deferred rent	132	52
Total current liabilities	31,649	23,855
Long-term debt	14,639	—
Deferred revenue, non-current	—	16,558
Long-term portion of deferred rent	359	491
Total liabilities	46,647	40,904
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.001 par value:		
Authorized: 10,000,000 shares;		
Issued and outstanding: Series A Convertible Preferred Stock — zero shares at December 31, 2015 and December 31, 2014	—	—
Common stock, $0.001 par value:		
Authorized: 81,500,000 shares;		
Issued and outstanding: 39,581,692 shares at December 31, 2015 and 38,659,738 shares at December 31, 2014	40	39
Additional paid-in capital	603,145	589,272
Accumulated other comprehensive income	149	(4)
Accumulated deficit	(534,744)	(497,243)
Total stockholders' equity	68,590	92,064
Total liabilities and stockholders' equity	$ 115,237	$ 132,968

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

CYTOKINETICS, INCORPORATED

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Years Ended December 31,		
	2015	2014	2013
	(In thousands, except per share data)		
Revenues:			
Research and development revenues from related parties	$ 14,665	$ 19,538	$ 2,019
Research and development, grant and other revenues	75	17,566	7,547
License revenues from related parties	13,918	—	17,230
License revenues	—	9,836	3,852
Total revenues	28,658	46,940	30,648
Operating expenses:			
Research and development	46,398	44,426	49,450
General and administrative	19,667	17,268	15,092
Total operating expenses	66,065	61,694	64,542
Operating loss	(37,407)	(14,754)	(33,894)
Interest and other income (expense), net	(94)	108	177
Loss before income taxes	(37,501)	(14,646)	(33,717)
Income tax benefit	—	—	—
Net loss	(37,501)	(14,646)	(33,717)
Net loss per share — basic and diluted	$ (0.97)	$ (0.41)	$ (1.24)
Weighted-average number of shares used in computing net loss per share — basic and diluted	38,814	35,709	27,275
Other comprehensive gain (loss):			
Unrealized gains (losses) on available-for-sale securities, net	153	(11)	(11)
Comprehensive loss	$(37,348)	$(14,657)	$(33,728)

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

CYTOKINETICS, INCORPORATED

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Preferred Stock					
	Shares	Amount	Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	(In thousands, except share and per share data)							
Balance, December 31, 2012	23,742,912	24	23,026	—	$ 518,923	18	(448,880)	70,085
Issuance of common stock upon exercise of stock options for cash at $4.02-$11.10 per share	21,397	—	—	—	114	—	—	114
Issuance of common stock pursuant to ESPP at a weighted price of $3.66 per share	14,985	—	—	—	55	—	—	55
Issuance of common stock upon exercise of restricted stock units	130,534	—	—	—	(623)	—	—	(623)
Issuance of common stock to related party for $7.12 per share, net of issuance costs of $21	1,404,100	2	—	—	7,448	—	—	7,450
Issuance of common stock upon exercise of warrants	359,460	—	—	—	5	—	—	5
Conversion of Series B convertible preferred stock to common stock at $1,000 per share	3,837,681	4	(23,026)	—	(4)	—	—	—
Fractional shares settlement pursuant to reverse stock split	(28)	—	—	—	—	—	—	—
Issuance of common stock to MLV at $6.50-$6.79 per share, net of commission and issuance costs of $232	1,170,583	1	—	—	7,486	—	—	7,487
Stock-based compensation	—	—	—	—	3,597	—	—	3,597
Other comprehensive loss	—	—	—	—	—	(11)	—	(11)
Net loss	—	—	—	—	—	—	(33,717)	(33,717)
Balance, December 31, 2013	30,681,624	$ 31	—	$ —	$ 537,001	$ 7	$ (482,597)	$ 54,442
Issuance of common stock upon exercise of stock options for cash at $6.00 per share	390	—	—	—	2	—	—	2
Issuance of common stock pursuant to ESPP at a weighted price of $3.38 per share	19,726	—	—	—	67	—	—	67
Issuance of common stock upon exercise of restricted stock units	11,704	—	—	—	(96)	—	—	(96)
Issuance of common stock upon exercise of warrants	510,125	1	—	—	5	—	—	6
Issuance of common stock to MLV at $6.64-$6.79 per share, net of commission and issuance costs of $74	364,103	—	—	—	2,376	—	—	2,376
Issuance of common stock to collaborative partner for $4.90 per share, net of issuance costs of $8	2,040,816	2	—	—	9,100	—	—	9,102
Issuance of common stock pursuant to February 2014 public offerings at $8.00 per share, net of issuance costs of $2,800	5,031,250	5	—	—	37,487	—	—	37,492
Stock-based compensation	—	—	—	—	3,330	—	—	3,330
Other comprehensive loss	—	—	—	—	—	(11)	—	(11)
Net loss	—	—	—	—	—	—	(14,646)	(14,646)

CYTOKINETICS, INCORPORATED

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY — (Continued)

	Common Stock		Preferred Stock					
	Shares	Amount	Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	(In thousands, except share and per share data)							
Balance, December 31, 2014	38,659,738	$ 39	—	$ —	$ 589,272	$ (4)	$ (497,243)	$ 92,064
Issuance of common stock upon exercise of stock options at a weighted price of $6.22 per share	68,635	—	—	—	427	—	—	427
Issuance of common stock pursuant to ESPP at a weighted price of $3.24 per share	21,167	—	—	—	69	—	—	69
Issuance of common stock upon exercise of restricted stock units	23,725	—	—	—	(144)	—	—	(144)
Issuance of common stock upon exercise of warrants	234	—	—	—	—	—	—	—
Issuance of common stock under CE Offering at $7.00-$12.68 per share, net of commission and issuance costs of $205	808,193	1	—	—	8,672	—	—	8,673
Issuance of warrants pursuant to the Loan Agreement	—	—	—	—	282	—	—	282
Stock-based compensation	—	—	—	—	4,567	—	—	4,567
Other comprehensive income	—	—	—	—	—	153	—	153
Net loss	—	—	—	—	—	—	(37,501)	(37,501)
Balance, December 31, 2015	39,581,692	$ 40	—	$ —	$ 603,145	$ 149	$ (534,744)	$ 68,590

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

CYTOKINETICS, INCORPORATED

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2015	2014	2013
		(In thousands)	
Cash flows from operating activities:			
Net loss	$ (37,501)	$ (14,646)	$(33,717)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization of property and equipment	589	490	433
Gain on disposal of equipment	(18)	—	(79)
Amortization of debt discount	3	—	—
Stock-based compensation	4,567	3,330	3,597
Gain on sale of investments	(3)	(6)	—
Changes in operating assets and liabilities:			
Related party accounts receivable	46,634	(46,641)	—
Prepaid and other assets	(396)	274	818
Accounts payable	755	(2,178)	1,656
Accrued and other liabilities	2,995	(2,865)	3,523
Related party payables and accrued liabilities	—	—	(150)
Deferred revenue	(12,742)	17,399	16,201
Net cash provided by (used in) operating activities	4,883	(44,843)	(7,718)
Cash flows from investing activities:			
Purchases of investments	(115,566)	(107,043)	(79,434)
Proceeds from sales and maturities of investments	132,190	104,098	78,444
Purchases of property and equipment	(562)	(1,104)	(542)
Proceeds from sales of property and equipment	1	—	13
Net cash provided by (used in) investing activities	16,063	(4,049)	(1,519)
Cash flows from financing activities:			
Proceeds from public offerings of common stock, net of issuance costs	8,673	48,971	7,450
Proceeds from long term debt, net of debt discount and issuance costs	14,890	—	—
Payments from stock based award activities and warrants, net	352	(22)	7,038
Net cash provided by financing activities	23,915	48,949	14,488
Net increase in cash and cash equivalents	44,861	57	5,251
Cash and cash equivalents, beginning of period	20,215	20,158	14,907
Cash and cash equivalents, end of period	$ 65,076	$ 20,215	$ 20,158

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

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Organization and Significant Accounting Policies

Organization

Cytokinetics, Incorporated (the "Company", "we" or "our") was incorporated under the laws of the state of Delaware on August 5, 1997. The Company is a late stage biopharmaceutical company focused on the discovery and development of novel small molecule therapeutics that modulate muscle function for the potential treatment of serious diseases and medical conditions.

The Company was in the development stage at December 31, 2012, as defined in Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 915, "*Development Stage Entities*." During the year ended December 31, 2013, the Company exited the development stage with the execution of the Amgen Agreement Amendment and the Original Astellas Agreement (See Note 7), from which the Company received significant revenues from its principal operations, indicative that the Company was no longer in the development stage.

The Company's financial statements contemplate the conduct of the Company's operations in the normal course of business. The Company has incurred an accumulated deficit of $534.7 million since inception and there can be no assurance that the Company will attain profitability. The Company had a net loss of $37.5 million and net cash provided by operations of $4.9 million for the year ended December 31, 2015. Cash, cash equivalents and investments increased to $111.6 million at December 31, 2015 from $83.2 million at December 31, 2014. The Company anticipates that it will continue to have operating losses and net cash outflows in future periods.

The Company is subject to risks common to late stage biopharmaceutical companies including, but not limited to, development of new drug candidates, dependence on key personnel, and the ability to obtain additional capital as needed to fund its future plans. The Company's liquidity will be impaired if sufficient additional capital is not available on terms acceptable to the Company. To date, the Company has funded its operations primarily through sales of its common stock and convertible preferred stock, contract payments under its collaboration agreements, debt financing arrangements, government grants and interest income. Until it achieves profitable operations, the Company intends to continue to fund operations through payments from strategic collaborations, additional sales of equity securities, grants and debt financings. The Company has never generated revenues from commercial sales of its drugs and may not have drugs to market for at least several years, if ever. The Company's success is dependent on its ability to enter into new strategic collaborations and/or raise additional capital and to successfully develop and market one or more of its drug candidates. As a result, the Company may choose to raise additional capital through equity or debt financings to continue to fund its operations in the future. The Company cannot be certain that sufficient funds will be available from such a financing or through a collaborator when required or on satisfactory terms. Additionally, there can be no assurance that the Company's drug candidates will be accepted in the marketplace or that any future products can be developed or manufactured at an acceptable cost. These factors could have a material adverse effect on the Company's future financial results, financial position and cash flows.

Based on the current status of its research and development plans, the Company believes that its existing cash, cash equivalents and investments at December 31, 2015 will be sufficient to fund its cash requirements for at least the next 12 months. If, at any time, the Company's prospects for financing its research and development programs decline, the Company may decide to reduce research and development expenses by delaying, discontinuing or reducing its funding of one or more of its research or development programs. Alternatively, the Company might raise funds through strategic collaborations, public or private financings or other arrangements. Such funding, if needed, may not be available on favorable terms, or at all. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Basis of Presentation

The consolidated financial statements include the accounts of Cytokinetics and its wholly owned subsidiary. The financial statements include all adjustments (consisting only of normal recurring adjustments) that management believes are necessary for the fair presentation of the balances and results for the periods presented.

Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to concentrations of risk consist principally of cash and cash equivalents, investments, long term debt and accounts receivable.

The Company's cash, cash equivalents and investments are invested in deposits with three major financial institutions in the United States. Deposits in these banks may exceed the amount of insurance provided on such deposits. The Company has not experienced any realized losses on its deposits of cash, cash equivalents or investments.

The economic turmoil in the United States in recent years, the extraordinary volatility in the stock markets and other current negative macroeconomic indicators could negatively impact the Company's ability to raise the funds necessary to support its business and may materially adversely affect its business, operating results and financial condition.

The Company performs an ongoing credit evaluation of its strategic partners' financial conditions and generally does not require collateral to secure accounts receivable from its strategic partners. The Company's exposure to credit risk associated with non-payment will be affected principally by conditions or occurrences within Amgen Inc. ("Amgen") and Astellas Pharma Inc. ("Astellas"), its strategic partners. Approximately 9%, 10% and 63% of total revenues for the years ended December 31, 2015, 2014 and 2013, respectively, were derived from Amgen. Accounts receivable due from Amgen were zero and $1.6 million at December 31, 2015 and 2014, respectively. See also Note 7, "Related Party Transactions," regarding the collaboration agreement with Amgen. Approximately 91%, 90% and 34% of total revenues for the years ended December 31, 2015, 2014 and 2013, respectively, were derived from Astellas. Accounts receivable due from Astellas were zero and $45.0 million at December 31, 2015 and 2014, respectively. See also Note 7, "Related Party Transactions," regarding the collaboration agreement with Astellas.

Drug candidates developed by the Company may require approvals or clearances from the U.S. Food and Drug Administration ("FDA") or international regulatory agencies prior to commercial sales. There can be no assurance that the Company's drug candidates will receive any of the required approvals or clearances. If the Company was to be denied approval or clearance or any such approval or clearance was to be delayed, it would have a material adverse impact on the Company.

The Company's operations and employees are located in the United States. In the year ended December 31, 2015, 9% of the Company's revenues were received from entities located in the United States and 91% were

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

received from a Japanese entity. In the year ended December 31, 2014, 10% of the Company's revenues were received from entities located in the United States and 90% were received from a Japanese entity. In the year ended December 31, 2013, 66% of the Company's revenues were received from entities located in the United States and 34% were received from a Japanese entity.

Cash and Cash Equivalents

The Company considers all highly liquid investments with a maturity of three months or less at the time of purchase to be cash equivalents.

Investments

Available-for-sale investments. The Company's investments consist of U.S. Treasury securities, and money market funds. The Company designates all investments as available-for-sale and therefore reports them at fair value, based on quoted marked prices, with unrealized gains and losses recorded in accumulated other comprehensive loss. The cost of securities sold is based on the specific-identification method. Investments with original maturities greater than three months and remaining maturities of one year or less are classified as short-term investments. Investments with remaining maturities greater than one year are classified as long-term investments. The amortized cost of debt securities in this category is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization is included in interest income. Recognized gains and losses and declines in value judged to be other-than-temporary, if any, on available-for-sale securities are included in other income or expense. Interest and dividends on securities classified as available-for-sale are included in Interest and other, net.

Other-than-temporary impairment. All of the Company's available-for-sale investments are subject to a periodic impairment review. The Company recognizes an impairment charge when a decline in the fair value of its investments below the cost basis is judged to be other-than-temporary. Factors considered by management in assessing whether an other-than-temporary impairment has occurred include: the nature of the investment; whether the decline in fair value is attributable to specific adverse conditions affecting the investment; the financial condition of the investee; the severity and the duration of the impairment; and whether the Company has the intent and ability to hold the investment to maturity. When the Company determines that an other-than-temporary impairment has occurred, the investment is written down to its market value at the end of the period in which it is determined that an other-than-temporary decline has occurred.

Fair Value of Financial Instruments

The fair value of financial instruments reflects the amounts that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Cash, accounts payable and accrued liabilities are carried at cost, which approximates fair value given their short-term nature. Marketable securities and cash equivalents, are carried at fair value.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and are depreciated on a straight-line basis over the estimated useful lives of the related assets, which are generally three years for computer equipment and software, five years for laboratory equipment and office equipment, and seven years for furniture and fixtures. Amortization of leasehold improvements is computed using the straight-line method over the shorter of the remaining lease term or the estimated useful life of the related assets, typically ranging from three

to seven years. Upon sale or retirement of assets, the costs and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is reflected in operations. Maintenance and repairs are charged to operations as incurred.

Impairment of Long-lived Assets

In accordance with the accounting guidance for the impairment or disposal of long-lived assets, the Company reviews long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Under the accounting guidance, an impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. Impairment, if any, is measured as the amount by which the carrying amount of a long-lived asset exceeds its fair value.

Revenue Recognition

The accounting guidance for revenue recognition requires that the following criteria must be met before revenue can be recognized: (i) persuasive evidence of an arrangement exists; (ii) delivery has occurred or services have been rendered; (iii) the fee is fixed or determinable; and (iv) collectability is reasonably assured. Determination of whether persuasive evidence of an arrangement exists and whether delivery has occurred or services have been rendered are based on management's judgments regarding the fixed nature of the fee charged for research performed and milestones met, and the collectability of those fees. Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected.

Revenue under our license and collaboration arrangements is recognized based on the performance requirements of the contract. Research and development revenues, which are earned under agreements with third parties for agreed research and development activities, may include non-refundable license fees, research and development funding, cost reimbursements and contingent milestones and royalties. The Company's collaborations prior to January 1, 2011 with multiple elements were evaluated and divided into separate units of accounting if certain criteria are met, including whether the delivered element has stand-alone value to the customer and whether there was vendor-specific objective and reliable evidence ("VSOE") of the fair value of the undelivered items. The consideration the Company received was allocated among the separate units based on their respective fair values, and the applicable revenue recognition criteria were applied to each of the separate units. The consideration the Company received was combined and recognized as a single unit of accounting when criteria for separation were not met. On January 1, 2011, ASC Topic 605-25, *Revenue Recognition — Multiple-Element Arrangements* ("ASC 605-25") on the recognition of revenues for agreements with multiple deliverables became effective and applies to any agreements the Company entered into on or after January 1, 2011. Under this updated guidance, revenue is allocated to each element using a selling price hierarchy, where the selling price for an element is based on VSOE if available; third-party evidence ("TPE"), if available and VSOE is not available; or the best estimate of selling price, if neither VSOE nor TPE is available.

Upfront, non-refundable licensing payments are assessed to determine whether or not the licensee is able to obtain stand-alone value from the license. Where the license does not have stand-alone value, non-refundable license fees are recognized as revenue as the Company performs under the applicable agreement. Where the level of effort is relatively consistent over the performance period, the Company recognizes total fixed or determined revenue on a straight-line basis over the estimated period of expected performance. Where the license has stand-alone value, the Company recognizes total license revenue at the time all revenue recognition criteria have been met.

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

ASC Topic 605-28, *Revenue Recognition — Milestone Method* ("ASC 605-28"), established the milestone method as an acceptable method of revenue recognition for certain contingent event-based payments under research and development arrangements. Under the milestone method, a payment that is contingent upon the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is an event (i) that can be achieved based in whole or in part on either the Company's performance or on the occurrence of a specific outcome resulting from the Company's performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, and (iii) that would result in additional payments being due to the Company. The determination that a milestone is substantive is judgmental and is made at the inception of the arrangement. Milestones are considered substantive when the consideration earned from the achievement of the milestone is (i) commensurate with either the Company's performance to achieve the milestone or the enhancement of value of the item delivered as a result of a specific outcome resulting from the Company's performance to achieve the milestone, (ii) relates solely to past performance and (iii) is reasonable relative to all deliverables and payment terms in the arrangement.

Other contingent event-based payments received for which payment is either contingent solely upon the passage of time or the results of a collaborative partner's performance are not considered milestones under ASC 605-28. Such payments will be recognized as revenue when all of the following criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been rendered, (iii) price is fixed or determinable, and (iv) collectability is reasonably assured.

For collaborations entered into prior to January 1, 2011, the Company recognized and will continue to recognize milestone payments as revenue upon achievement of the milestone, provided the milestone payment was non-refundable, substantive effort and risk were involved in achieving the milestone and the amount of the milestone was reasonable in relation to the effort expended or risk associated with the achievement of the milestone. If these conditions were not met, the Company deferred the milestone payment and recognized it as revenue over the estimated period of performance under the contract as the Company completed its performance obligations. The Company has concluded that all of the future contingent milestone payments pursuant to its research and development arrangements entered into prior to January 1, 2011 are not considered substantive as they are the results of a collaborative partner's performance. Therefore, they are not considered milestones under ASC 605-28.

For collaborations and material modifications entered into after January 1, 2011, the Company accounts for milestone payments under the provisions of ASC 605-28. The Company considers an event to be a milestone if there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, if the event can only be achieved with the Company's performance, and if the achievement of the event results in payment to the Company. If the Company determines a milestone is substantive, the Company recognizes revenue when payment is earned and becomes payable. For a milestone to be considered substantive, it must be achieved with the Company's performance, be reasonable relative to the terms of the arrangement and be commensurate with the Company's effort to achieve the milestone or commensurate with the enhanced value of the delivered item(s) as a result of the milestone achievement. If the Company determines a milestone is not substantive, the Company defers the payment and recognizes revenue over the estimated remaining period of performance as the Company completes its performance obligations, if any.

Research and development revenues and cost reimbursements are based upon negotiated rates for the Company's full-time employee equivalents ("FTE") and actual out-of-pocket costs. FTE rates are negotiated rates that are based upon the Company's costs, and which the Company believes approximate fair value. Any amounts received in advance of performance are recorded as deferred revenue. None of the revenues recognized

to date are refundable if the relevant research effort is not successful. In revenue arrangements in which both parties make payments to each other, the Company evaluates the payments in accordance with the accounting guidance for arrangements under which consideration is given by a vendor to a customer, including a reseller of the vendor's products, to determine whether payments made by us will be recognized as a reduction of revenue or as expense. In accordance with this guidance, revenue recognized by the Company may be reduced by payments made to the other party under the arrangement unless the Company receives a separate and identifiable benefit in exchange for the payments and the Company can reasonably estimate the fair value of the benefit received. The application of the accounting guidance for consideration given to a customer has had no material impact to the Company.

Funds received from third parties under grant arrangements are recorded as revenue if the Company is deemed to be the principal participant in the grant arrangement as the activities under the grant are part of the Company's development program. If the Company is not the principal participant, the grant funds are recorded as a reduction to research and development expense. Grant funds received are not refundable and are recognized when the related qualified research and development costs are incurred and when there is reasonable assurance that the funds will be received. Funds received in advance are recorded as deferred revenue.

Preclinical Studies and Clinical Trial Accruals

A substantial portion of the Company's preclinical studies and all of the Company's clinical trials have been performed by third-party contract research organizations ("CROs") and other vendors. For preclinical studies, the significant factors used in estimating accruals include the percentage of work completed to date and contract milestones achieved. For clinical trial expenses, the significant factors used in estimating accruals include the number of patients enrolled, duration of enrollment and percentage of work completed to date. The Company monitors patient enrollment levels and related activities to the extent practicable through internal reviews, correspondence and status meetings with CROs, and review of contractual terms. The Company's estimates are dependent on the timeliness and accuracy of data provided by its CROs and other vendors. If the Company has incomplete or inaccurate data, it may under- or overestimate activity levels associated with various studies or trials at a given point in time. In this event, it could record adjustments to research and development expenses in future periods when the actual activity level becomes known. No material adjustments to preclinical study and clinical trial expenses have been recognized to date.

Research and Development Expenditures

Research and development costs are charged to operations as incurred. Research and development expenses consist primarily of clinical manufacturing costs, preclinical study expenses, consulting and other third party costs, employee compensation, supplies and materials, allocation of overhead and occupancy costs, facilities costs and depreciation of equipment.

Income Taxes

The Company accounts for income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company also follows the accounting guidance that defines the threshold for recognizing the benefits of tax return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authorities

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

based solely on the technical merits of the position. If the recognition threshold is met, the tax benefit is measured and recognized as the largest amount of tax benefit that, in the Company's judgment, is greater than 50% likely to be realized.

Comprehensive Loss

The Company follows the accounting standards for the reporting and presentation of comprehensive income (loss) and its components in a continuous statement of comprehensive income (loss). Comprehensive loss includes all changes in stockholders' equity during a period from non-owner sources. Comprehensive loss for each of the years ended December 31, 2015, 2014, and 2013 was equal to net loss adjusted for unrealized gains and losses on investments.

Segment Reporting

The Company has determined that it operates in only one segment — the discovery and development of first-in-class muscle activator therapies.

Reverse Stock Split

On June 24, 2013, the Company effected a one-for-six reverse stock split of its common stock through an amendment to its amended and restated certificate of incorporation (the "COI Amendment"). As of the effective time of the reverse stock split, every six shares of the Company's issued and outstanding common stock were converted into one issued and outstanding share of common stock, without any change in par value per share. The reverse stock split affected all shares of the Company's common stock outstanding immediately prior to the effective time of the reverse stock split, as well as the number of shares of common stock available for issuance under the Company's equity incentive plans. In addition, the reverse stock split effected a reduction in the number of shares of common stock issuable upon the conversion of shares of preferred stock or upon the exercise of stock options or warrants outstanding immediately prior to the effectiveness of the reverse stock split. No fractional shares were issued as a result of the reverse stock split. Stockholders who would otherwise have been entitled to receive a fractional share received cash payments in lieu thereof. In addition, the COI Amendment reduced the number of authorized shares of common stock to 81.5 million.

As the par value per share of the Company's common stock remained unchanged at $0.001 per share, a total of $139,000 was reclassified from common stock to additional paid-in capital. All references to shares of common stock and per share data for all periods presented in the accompanying financial statements and notes thereto have been adjusted to reflect the reverse stock split on a retroactive basis.

Stock-Based Compensation

The Company accounts for stock-based payment awards made to employees and directors, including employee stock options and employee stock purchases by measuring the stock-based compensation cost at the grant date based on the calculated fair value of the award, and recognizing expense on a straight-line basis over the employee's requisite service period, generally the vesting period of the award. Stock compensation for non-employees is measured at the fair value of the award for each period until the award is fully vested. Compensation cost for restricted stock awards that contain performance conditions is based on the grant date fair value of the award and compensation expense is recorded over the implicit or explicit requisite service period based on management's best estimate as to whether it is probable that the shares awarded are expected to vest.

The Company reviews the valuation assumptions at each grant date and, as a result, from time to time it will likely change the valuation assumptions it uses to value stock based awards granted in future periods. The

assumptions used in calculating the fair value of share-based payment awards represent management's best estimates at the time, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if conditions change and the management uses different assumptions, the Company's stock-based compensation expense could be materially different in the future. In addition, the Company is required to estimate the expected forfeiture rate and recognize expense only for those shares expected to vest. If the actual forfeiture rate is materially different from management's estimate, stock-based compensation expense could be significantly different from what has been recorded in the current period.

Prior Year's Presentations

Certain amounts in the prior year's presentations have been reclassified to conform to the current presentation. These reclassifications had no effect on previously reported net income.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*, which simplifies the presentation of deferred income taxes. This ASU requires that deferred tax assets and liabilities be classified as non-current in a statement of financial position. ASU 2015-17 will become effective for fiscal years, and the interim periods within those years, beginning after December 15, 2016, with early adoption allowed. The Company early adopted ASU 2015-17 on a prospective basis in the fourth quarter of 2015. Adoption of this ASU had no material impact on the Company's financial statements. No prior periods were retrospectively adjusted.

In April 2015, the FASB issued ASU No. 2015-03, *Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs* ("ASU 2015-03"), which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, consistent with debt discounts. ASU 2015-03 applies to all business entities and is effective for public business entities for annual periods, and interim periods beginning after December 15, 2015. The Company elected to early adopt ASU 2015-03, during the fourth quarter of 2015 and the adoption of ASU 2015-03 did not have a material effect on its financial statements.

Accounting Pronouncements Not Yet Adopted

In January 2016, the FASB issued ASU 2016-01, *Financial instruments (Subtopic 825-10).* ASU 2016-01 requires management to measure equity investments at fair value with changes in fair value recognized in net income. ASU 2016-01 is effective for annual and interim reporting periods beginning on or after December 15, 2017 and early adoption is not permitted. The Company does not expect the adoption of ASU 2016-01 to have a material effect upon its financial statements or disclosures.

In August 2014, the FASB issued ASU 2014-15, *Presentation of Financial Statements — Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern.* ASU 2014-15 requires management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. ASU 2014-15 is effective for annual and interim reporting periods beginning on or after December 15, 2016 and early adoption is permitted. The Company does not expect the adoption of ASU 2014-15 to have a material effect upon its financial statements or disclosures.

In June 2014, the FASB issued ASU 2014-12, *Stock Compensation (Topic 718)* an amendment to its accounting guidance related to stock-based compensation. The amendment requires that a performance target that

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

could be achieved after the requisite service period be treated as a performance condition that affects vesting, rather than a condition that affects the grant-date fair value. ASU 2014-12 is effective for annual and interim periods beginning after December 15, 2015. Early adoption is permitted. The amendment can be applied on a prospective basis to all share-based payments granted or modified on or after the effective date. Entities will also be provided an option to apply the guidance on a modified retrospective basis to existing awards. The Company does not expect the adoption of ASU 2014-12 to have a material effect upon its financial statements

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which delayed the effective date of the new standard from January 1, 2017 to January 1, 2018. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date. We are currently evaluating the method of adoption and the potential impact that Topic 606 may have on our financial position and results of operations.

Note 2 — Net Loss Per Share

Basic net loss per share is computed by dividing net loss by the weighted average number of vested common shares outstanding during the period. Diluted net loss per share is computed by giving effect to all potentially dilutive common shares, including outstanding stock options, unvested restricted stock, warrants, convertible preferred stock and shares issuable under the Company's Employee Stock Purchase Plan ("ESPP"), by applying the treasury stock method. The following is the calculation of basic and diluted net loss per share (in thousands, except per share data):

	Years Ended December 31,		
	2015	2014	2013
Net loss	$(37,501)	$(14,646)	$(33,717)
Weighted-average shares used in computing net loss per share — basic and diluted	38,814	35,709	27,275
Net loss per share — basic and diluted	$ (0.97)	$ (0.41)	$ (1.24)

The following instruments were excluded from the computation of diluted net loss per share for the periods presented because their effect would have been antidilutive (in thousands):

	December 31,		
	2015	2014	2013
Options to purchase common stock	4,835	3,298	2,449
Warrants to purchase common stock	5,641	6,691	7,692
Restricted and Performance stock units	757	63	42
Shares issuable related to the ESPP	16	15	14
Total shares	11,249	10,067	10,197

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 3 — Supplementary Cash Flow Data

Supplemental cash flow information was as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Cash paid for interest	$ 94	$ —	$ —
Cash paid for income taxes	1	1	1
Significant non-cash investing and financing activities:			
Debt discount netted against proceeds from long term debt, recorded in equity	282	—	—
Interest paid on the long-term debt, at inception	41	—	—
Purchases of property and equipment through accounts payable	(147)	170	193
Purchases of property and equipment through accrued liabilities	(2)	27	(2)
Purchases of property and equipment through trade in value of disposed property and equipment	—	—	81

Note 4 — Cash Equivalents and Investments

Cash Equivalents and Available for Sale Investments

The amortized cost and fair value of cash equivalents and available for sale investments at December 31, 2015 and 2014 were as follows (in thousands):

	December 31, 2015				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Maturity Dates
Cash equivalents — money market funds	$63,136	$ —	$ —	$63,136	
Short-term investments — U.S. Treasury securities	$46,395	$ 1	$ (30)	$46,366	2/2016 — 8/2016
Long-term investments — equity securities	$ —	$ 179	$ —	$ 179	

	December 31, 2014				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Maturity Dates
Cash equivalents — money market funds	$16,932	$ —	$ —	$16,932	
Short-term investments — U.S. Treasury securities	$63,017	$ 3	$ (7)	$63,013	1/2015 — 12/2015

As of December 31, 2015 and December 31, 2014, the Company's U.S. Treasury securities classified as short-term investments had unrealized losses of approximately $30,000 and $7,000, respectively. The net unrealized loss at December 31, 2015 and December 31, 2014 was primarily caused by increases in short-term interest rates subsequent to the purchase dates of the related securities. At December 31, 2015 there were no investments that had been in a continuous unrealized loss position for 12 months or longer. The Company collected the contractual cash flows on its U.S. Treasury securities that matured from January 1, 2016 through February 26, 2016 and expects to be able to collect all contractual cash flows on the remaining maturities of its U.S. Treasury securities.

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Interest income was as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Interest income	$156	$101	$96

The Company has revised the previously reported disclosure of interest income for the year ended December 2013. The correction had no effect upon the consolidated statement of comprehensive loss amounts.

Note 5 — Fair Value Measurements

The Company adopted the fair value accounting guidance to value its financial assets and liabilities. Fair value is defined as the price that would be received for assets when sold or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Company utilizes market data or assumptions that the Company believes market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. These inputs can be readily observable, market corroborated or generally unobservable.

The Company primarily applies the market approach for recurring fair value measurements and endeavors to utilize the best information reasonably available. Accordingly, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible, and considers the security issuers' and the third-party insurers' credit risk in its assessment of fair value.

The Company classifies the determined fair value based on the observability of those inputs. Fair value accounting guidance establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The three defined levels of the fair value hierarchy are as follows:

Level 1 — Observable inputs, such as quoted prices in active markets for identical assets or liabilities;

Level 2 — Inputs, other than the quoted prices in active markets, that are observable either directly or through corroboration with observable market data; and

Level 3 — Unobservable inputs, for which there is little or no market data for the assets or liabilities, such as internally-developed valuation models.

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Financial assets measured at fair value on a recurring basis as of December 31, 2015 and 2014 are classified in the table below in one of the three categories described above (in thousands):

	December 31, 2015			
	Fair Value Measurements Using			Assets
	Level 1	Level 2	Level 3	At Fair Value
Assets:				
Money market funds	$ 63,136	$ —	$ —	$ 63,136
U.S. Treasury securities	46,366	—	—	46,366
Equity securities	179	—	—	179
Total	$109,681	$ —	$ —	$ 109,681
Amounts included in:				
Cash and cash equivalents	$ 63,136	$ —	$ —	$ 63,136
Short-term investments	46,366	—	—	46,366
Long-term investments	179	—	—	179
Total	$109,681	$ —	$ —	$ 109,681

	December 31, 2014			
	Fair Value Measurements Using			Assets
	Level 1	Level 2	Level 3	At Fair Value
Money market funds	$ 16,932	$ —	$ —	$ 16,932
U.S. Treasury securities	63,013	—	—	63,013
Total	$ 79,945	$ —	$ —	$ 79,945
Amounts included in:				
Cash and cash equivalents	$ 16,932	$ —	$ —	$ 16,932
Short-term investments	63,013	—	—	63,013
Long-term investments	—	—	—	—
Total	$ 79,945	$ —	$ —	$ 79,945

The valuation technique used to measure fair value for the Company's Level 1 assets is a market approach, using prices and other relevant information generated by market transactions involving identical assets. As of December 31, 2015 and 2014, the Company had no financial assets measured at fair value on a recurring basis using significant Level 2 or Level 3 inputs. The carrying amount of the Company's accounts receivable and accounts payable approximates fair value due to the short-term nature of these instruments.

Long Term Debt:

As of December 31, 2015 and December 31, 2014, the fair value of the long-term debt, payable in installments through year ended 2020, approximated its carrying value of $14.6 million and zero dollars, respectively, because it is carried at a market observable interest rate.

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 6 — Balance Sheet Components

Property and equipment balances were as follows (in thousands):

	December 31,	
	2015	2014
Property and equipment, net:		
Laboratory equipment	$ 15,713	$ 15,299
Computer equipment and software	2,510	2,418
Office equipment, furniture and fixtures	945	913
Leasehold improvements	3,425	3,334
	22,593	21,964
Less: Accumulated depreciation and amortization	(20,842)	(20,327)
	$ 1,751	$ 1,637

Depreciation expense was $0.6 million, $0.5 million and $0.4 million for the years ended December 31, 2015, 2014 and 2013 respectively.

Accrued liabilities were as follows (in thousands):

	December 31,	
	2015	2014
Accrued liabilities:		
Clinical and preclinical costs	$ 3,446	$ 972
Bonus	2,720	2,665
Other payroll related	1,464	1,025
Other accrued expenses	791	738
	$ 8,421	$5,400

Interest receivable on cash equivalents and investments of $231,000 and $109,000 is included in prepaid and other current assets at December 31, 2015 and 2014, respectively.

The Company sponsors a 401(k) defined contribution plan covering all employees. There were no employer contributions to the plan from inception through December 31, 2013. In 2015 and 2014, employer contributions to the 401(k) plan were $354,000 and $336,000, respectively.

Note 7 — Related Parties and Related Party Transactions

Research and Development Arrangements

Amgen Inc. ("Amgen")

In December 2006, the Company entered into a collaboration and option agreement with Amgen to discover, develop and commercialize novel small molecule therapeutics, including omecamtiv mecarbil, that activate cardiac muscle contractility for potential applications in the treatment of heart failure (the "Amgen Agreement"). The agreement granted Amgen an option to obtain an exclusive license worldwide, except Japan, to develop and commercialize omecamtiv mecarbil and other drug candidates arising from the collaboration. In May 2009, Amgen exercised its option. As a result, Amgen became responsible for the development and commercialization of omecamtiv mecarbil and related compounds at its expense worldwide (excluding Japan),

subject to the Company's development and commercialization participation rights. Amgen reimburses the Company for certain research and development activities it performs under the collaboration.

In June 2013, Cytokinetics and Amgen executed an amendment to the Amgen Agreement to include Japan, resulting in a worldwide collaboration (the "Amgen Agreement Amendment"). Under the terms of the Amgen Agreement Amendment, the Company received a non-refundable upfront license fee of $15.0 million in June 2013. Under the Amgen Agreement Amendment, the Company conducted a Phase 1 pharmacokinetic study intended to support inclusion of Japan in a potential Phase 3 clinical development program and potential global registration dossier for omecamtiv mecarbil. Amgen reimbursed the Company for the costs of this study. In addition, the Company is eligible to receive additional pre-commercialization milestone payments relating to the development of omecamtiv mecarbil and royalties on sales of omecamtiv mecarbil in Japan.

In conjunction with the Amgen Agreement Amendment, the Company also entered into a common stock purchase agreement which provided for the sale of 1,404,100 shares of its common stock to Amgen at a price per share of $7.12 and an aggregate purchase price of $10.0 million, which was received in June 2013. The Company determined the fair value of the stock issued to Amgen to be $7.5 million. The excess of cash received over fair value of $2.5 million was initially deferred and allocated between the license and services based on their relative selling prices using best estimate of selling price. The allocated consideration was recognized as revenue as revenue criteria were satisfied, or as services were performed over approximately 12 months. Pursuant to this agreement, Amgen agreed to certain trading and other restrictions with respect to the Company's common stock.

The Company determined that the license to the Japan territory granted under the Amgen Agreement Amendment was a separate, non-contingent deliverable under the amendment. The Company determined that the license has stand-alone value based on Amgen's internal product development capabilities since all relevant manufacturing know-how related to omecamtiv mecarbil was previously delivered to Amgen.

In October 2013, the Company determined that the revenue recognition requirements had been met and accordingly, recognized $17.2 million in license revenue attributable to the Amgen Agreement Amendment in the fourth quarter of 2013. In year ended December 31, 2014, the Company recognized the remaining $0.3 million of the previously deferred consideration attributable to the Amgen Agreement Amendment as research and development revenues from related parties.

Amgen and the Company agreed to extend the term of the research program in 2015. Under the amended Amgen Agreement, the Company is entitled to receive reimbursements of internal costs of certain full-time employee equivalents during 2015, as well as potential additional milestone payments related to the research activities.

Under the Amgen Agreement, as amended, the Company is eligible to receive over $350.0 million in development milestone payments which are based on various clinical milestones, including the initiation of certain clinical studies, the submission of a drug candidate to certain regulatory authorities for marketing approval and the receipt of such approvals. Additionally, the Company is eligible to receive up to $300.0 million in commercial milestone payments provided certain sales targets are met. Due to the nature of drug development, including the inherent risk of development and approval of drug candidates by regulatory authorities, it is not possible to estimate if and when these milestone payments would become due. The achievement of each of these milestones is dependent solely upon the results of Amgen's development and commercialization activities and therefore none of these milestones was deemed to be substantive. During the years ended December 31, 2015, 2014 and 2013, the Company recognized no revenue for milestones achieved under the Amgen Agreement.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Amgen Agreement also provides for the Company to receive increased royalties by co-funding Phase 3 development costs of omecamtiv mecarbil and other drug candidates under the collaboration. If the Company elects to co-fund such costs, it would be entitled to co-promote the co-funded drug in North America and participate in agreed commercialization activities in institutional care settings, at Amgen's expense.

Pursuant to the Amgen Agreement, the Company has recognized research and development revenue from Amgen for reimbursements of internal costs of certain full-time employee equivalents, supporting a collaborative research program directed to the discovery of next-generation cardiac sarcomere activator compounds and of other costs related to that research program. These reimbursements were recorded as research and development revenues from related parties. During the years ended December 31, 2015, 2014 and 2013, the Company recorded research and development revenue from Amgen of $2.5 million, $4.5 million and $2.0 million, respectively, under the Amgen Agreement.

Revenue from Amgen was as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
License revenues from related parties	$ —	$ —	$17,230
Research and development revenues from related parties:			
Reimbursement of internal costs	2,460	4,260	2,019
Reimbursement of other costs	—	—	—
Allocated consideration	21	278	—
Total Research and development revenues from related parties	2,481	4,538	2,019
Total revenues from Amgen	$2,481	$4,538	$19,249

Related party accounts receivable from Amgen were as follows (in thousands):

	December 31,	
	2015	2014
Related party accounts receivable — Amgen	$ —	$1,642

Astellas Pharma Inc. ("Astellas")

Original Astellas Agreement (Non-neuromuscular license)

In June 2013, the Company entered into a license and collaboration agreement with Astellas (the "Original Astellas Agreement"). The primary objective of the collaboration with Astellas is to advance novel therapies for diseases and medical conditions associated with muscle weakness.

Under the Original Astellas Agreement, the Company granted Astellas an exclusive license to co-develop and jointly commercialize CK-2127107, a fast skeletal troponin activator, for potential application in non-neuromuscular indications worldwide. The Company was primarily responsible for the conduct of Phase 1 clinical trials and certain Phase 2 readiness activities for CK-2127107 and Astellas was primarily responsible for the conduct of subsequent development and commercialization activities for CK-2127107.

In July 2013, the Company received an upfront, non-refundable license fee of $16.0 million in connection with the execution of the Original Astellas Agreement. Under the agreement, the Company was eligible to potentially receive over $24.0 million in reimbursement of sponsored research and development activities during the initial two years of the collaboration. The agreement also provided for research and early and late stage

development milestone payments based on various research and clinical milestones, including the initiation of certain clinical studies, the submission for approval of a drug candidate to certain regulatory authorities for marketing approval and the commercial launch of collaboration products, and royalties on sales of commercialized products.

At the inception of the Original Astellas Agreement, the Company deferred revenue related to the Original Astellas Agreement in accordance with ASC 605-25. The Company evaluated whether the delivered elements under the arrangement have value on a stand-alone basis. Upfront, non-refundable licensing payments are assessed to determine whether or not the licensee is able to obtain stand-alone value from the license. Where this is not the case, the Company does not consider the license deliverable to be a separate unit of accounting, and the revenue for the license fee is deferred and recognized in conjunction with the other deliverables that constitute the combined unit of accounting.

The Company determined that the license and the research and development services are a single unit of accounting as the license was determined to not have stand-alone value. Accordingly, the Company is recognizing this revenue using the proportional performance model over the initial research term of the Original Astellas Agreement. During the years ended December 31, 2015, 2014 and 2013, the Company recorded $2.3 million, $9.8 million and $3.9 million, respectively, in license revenue based on the proportional performance model under the Original Astellas Agreement. As of December 31, 2015, no license revenue remains deferred under the Original Astellas Agreement.

Pursuant to the Original Astellas Agreement, the Company has recognized research and development revenue from Astellas for reimbursements of internal costs of certain full-time employee equivalents, supporting collaborative research and development programs, and of other costs related to those programs. During the years ended December 31, 2015, 2014 and 2013, the Company recorded research and development revenue from Astellas of $3.5 million, $15.4 million and $6.4 million, respectively, under the Original Astellas Agreement.

Amended Astellas Agreement (Expansion to include neuromuscular indications)

In December 2014, the Company entered into an amended and restated license and collaboration agreement with Astellas (the "Amended Astellas Agreement"). This agreement superseded the Original Astellas Agreement. The Amended Astellas Agreement expanded the objective of the collaboration of advancing novel therapies for diseases and medical conditions associated with muscle weakness to include SMA and potentially other neuromuscular indications for CK-2127107 and other fast skeletal troponin activators, in addition to the non-neuromuscular indications provided for in the Original Astellas Agreement.

Under the Amended Astellas Agreement, we received a non-refundable upfront license fee of $30.0 million in January 2015. Concurrently, the Company received $15.0 million as a milestone payment relating to Astellas' decision to advance CK-2127107 into Phase 2 clinical development. The Company is also eligible to potentially receive over $20.0 million in reimbursement of sponsored research and development activities during the two years of the collaboration following the execution of the Amended Astellas Agreement. Under the Amended Astellas Agreement, the Company plans to conduct the initial Phase 2 clinical trial of CK-2127107 in patients with SMA. In addition, the Company is entitled to receive additional pre-commercialization milestone payments related to the development of CK-2127107 in neuromuscular indications, and royalties on sales of CK-2127107 in neuromuscular indications.

The Company determined that the license and the research and development services relating to the Amended Astellas Agreement are a single unit of accounting as the license was determined to not have stand-

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

alone value. Accordingly, the Company is recognizing this revenue over the initial research term of the Amended Astellas Agreement using the proportional performance model. During the year ended December 31, 2015, the Company recorded $11.6 million, in license revenue based on the proportional performance model under the Amended Astellas Agreement. No such revenues were recognized during the years ended December 31, 2014 or 2013, respectively. As of December 31, 2015, $18.4 million license revenue remains deferred under the Amended Astellas Agreement.

The Company believes that each of the milestones related to research and early development under the Amended Astellas Agreement is substantive and can only be achieved with the Company's past and current performance and each milestone will result in additional payments to the Company. During the year ended December 31, 2014, the Company recorded $17.0 million as milestone revenue for early development under this agreement. No such revenues were recognized for the years ended December 31, 2015 or 2013, respectively. The Company is eligible to receive up to $2.0 million in research milestone payments for each future collaboration product candidate.

The achievement of each of the late stage development milestones and the commercialization milestones are dependent solely upon the results of Astellas' development activities and therefore these milestones were not deemed to be substantive.

Under the Amended Astellas Agreement, additional research and early and late state development milestone payments which are based on various research and clinical milestones, including the initiation of certain clinical studies, the submission for approval of a drug candidate to certain regulatory authorities for marketing approval and the commercial launch of collaboration products could total over $600.0 million, including up to $95.0 million relating to CK-2127107 in non-neuromuscular indications, and over $100.0 million related to CK-2127107 in each of SMA and other neuromuscular indications. Additionally, $200.0 million in commercial milestones could be received under the Amended Astellas Agreement provided certain sales targets are met. Due to the nature of drug development, including the inherent risk of development and approval of drug candidates by regulatory authorities, it is not possible to estimate if and when these milestone payments could become due.

In the event Astellas commercializes any collaboration products, the Company will receive royalties on sales of such collaboration products, including royalties ranging from the high single digits to the high teens on sales of products containing CK-2127107. Cytokinetics also holds an option to co-fund certain development costs for CK-2127107 and other compounds in exchange for increased milestone payments and royalties; such royalties may increase under certain scenarios to exceed twenty percent. Under the Amended Astellas Agreement, Cytokinetics retains an option to co-promote collaboration products containing fast skeletal muscle activators for neuromuscular indications in the U.S., Canada and Europe, in addition to its option to co-promote other collaboration products in the U.S. and Canada as provided for in the Original Astellas Agreement. Astellas will reimburse Cytokinetics for certain expenses associated with its co-promotion activities. The Amended Astellas Agreement also provides for Cytokinetics to lead certain activities relating to the commercialization of collaboration products for neuromuscular indications in the U.S., Canada and Europe under particular scenarios.

In conjunction with the Amended Astellas Agreement, the Company also entered into a common stock purchase agreement which provided for the sale of 2,040,816 shares of its common stock to Astellas at a price per share of $4.90 and an aggregate purchase price of $10.0 million which was received in December 2014. Pursuant to this agreement, Astellas agreed to certain trading and other restrictions with respect to the Company's common stock. The Company determined the fair value of the stock issued to Astellas to be $9.1 million. The excess of cash received over fair value of $0.9 million was deferred along with the license and research and development services. Allocated consideration will be recognized as revenue for the single unit of

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

accounting above, as services are performed following the proportional performance model over the initial research term of the Amended Astellas Agreement.

Following the common stock purchase, Astellas was determined to be a related party. As such, all revenue earned following the common stock purchase will be classified as related party revenue.

Research and development revenue from Astellas was as follows (in thousands):

	Year Ended December 31, 2015	Year Ended December 31, 2014	Year Ended December 31, 2013
License Revenues from Related Parties	$ 13,918	$ 9,835	$ 3,852
Research and development revenues with related parties:			
Reimbursement of internal costs	6,210	—	—
Reimbursement of other costs	5,974	—	—
Research and development milestone fees	—	15,000	—
Total research and development revenue with related parties from Astellas	$ 12,184	$ 15,000	$ —
Research and development revenues:			
Reimbursement of internal costs	—	8,939	3,285
Reimbursement of other costs	—	6,452	3,130
Research and development milestone fees	—	2,000	
Total research and development revenue from Astellas	—	32,391	6,415
Total Revenue from Astellas	$ 26,102	$ 42,226	$ 10,267

Related party accounts receivable from Astellas were as follows (in thousands):

	December 31,	
	2015	2014
Related party accounts receivable — Astellas	$—	$45,000

At December 31, 2015 and December 31, 2014, the Company had $20.4 million and $33.6 million, respectively, of deferred revenue under the Amended Astellas Agreement, reflecting the unrecognized portion of the license revenue, allocation of consideration and payment of expenses.

Note 8 — Other Research and Development Revenue Arrangements

Grants

In July 2015, The ALS Association (the "ALSA Grant") awarded to the Company a $1.5 million grant to support the conduct of VITALITY-ALS as well as the collection of clinical data and plasma samples from patients in VITALITY-ALS in order to help advance the discovery of potentially useful biomarkers in ALS. On August 28, 2015 the Company achieved its first milestone under the ALSA Grant which triggered a payment of $0.5 million in accordance with the ALSA Grant. The Company recorded $0.1 million as grant revenue as qualified expenses were incurred and approved by management. At December 31, 2015, the Company had $0.4 million of deferred revenue under the ALSA Grant, reflecting the unrecognized portion of the grant revenue.

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In 2010, the National Institute of Neurological Disorders and Strokes ("NINDS") awarded to the Company a $2.8 million grant to support research and development of tirasemtiv directed to the potential treatment for myasthenia gravis for a period of up to three years. In September 2012, the NINDS awarded to us an additional $0.5 million under a separate grant. Management determined that the Company was the principal participant in the grant arrangements, and, accordingly, the Company recorded amounts earned under the arrangements as revenue. The grants were completed in June 2013.

Total grant revenues were as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
ALSA grant revenue	$75	$—	$—
NINDS myasthenia gravis	—	—	69
Other grant revenue	—	75	25
Total grant revenue	$75	$75	$94

MyoKardia, Inc.

In August 2012, the Company entered into a collaboration agreement with MyoKardia, Inc. Under an agreed research plan, scientists from MyoKardia and our FTEs conduct research focused on small molecule therapeutics that inhibit cardiac sarcomere proteins. The Company provided to MyoKardia access to certain research facilities, and continues to provide FTEs and other resources at agreed reimbursement rates that approximate our costs. The Company is the primary obligor in the collaboration arrangement, and accordingly, the Company records expense reimbursements from MyoKardia as research and development revenue. The research plan terminated as planned in August 2013.

Research and development revenue from MyoKardia was as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Research and development milestone fees	$—	$100	$ —
Expense reimbursements from MyoKardia	—	—	1,024
Research and development revenue from Myokardia	$—	$100	$ 1,024

Note 9 — Long-Term Debt

Long-term debt and unamortized debt discount balances are as follows (in thousands):

	December 31,	
	2015	2014
Notes payable, gross	$15,000	$—
Less: Unamortized debt discount	(389)	—
Accretion of final exit fee	28	
Carrying value of notes payable	$14,639	$—

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In October 2015, the Company entered into a loan and security agreement (the "Loan Agreement") with Oxford Finance LLC ("Oxford,") as the collateral agent and a lender, and Silicon Valley Bank ("SVB,") as a lender (Oxford and SVB collectively the "Lenders") to fund its working capital and other general corporate needs. The Loan Agreement provided for (1) term loans of up to $40.0 million in aggregate, (2) warrants to purchase 65,189 shares of the Company's common stock at an exercise price of $6.90 per share under the first term loan, and (3) additional warrants to purchase shares of the Company's common stock to be based on the amount of the additional term loans and a price per share determined on the day of funding in accordance with the Grant Agreement, which is also the exercise price per share for the warrants.

The Company drew down $15.0 million in funds under the Loan Agreement in October 2015 at the time of the first draw down, respectively, and may at its sole discretion draw down an additional $25 million under the Loan Agreement in two term loans, provided certain specified conditions stipulated in the Loan Agreement are met preceding those draws.

During February 2016, the company drew down an additional $15.0 million in funds under the Loan Agreement and issued warrants to purchase 68,285 shares of the Company's common stock at an exercise price of $6.59 per share under the second term loan. Refer to Note 16 for further detail. As of February 26, 2016, there were 133,474 warrants outstanding and exercisable. As of February 26, 2016 we have received $29.6 million from this loan and security agreement, net of issuance cost.

The expiration date of the remaining term loan of $10.0 million is March 2017. The Company is required to repay the outstanding principal in 36 equal installments beginning October 2017 and is due in full in in October 2020. The first and second term loans bear interest at a rate of 7.5% per annum, respectively. The remaining term loans, if drawn, will bear interest at a rate fixed at the time of draw, equal to the greater of (i) 7.50% and (ii) the sum of the three month U.S. LIBOR rate plus 7.31%. The Company is required to make a final payment fee of 4.00% of the amounts of the Term Loans drawn payable on the earlier of (i) the prepayment of the Term Loans or (ii) the Maturity Date. The loan carries prepayment penalties of 3% and 2% for prepayment within one and two years, respectively, of the loan origination and 1% thereafter. The warrants issued in the Loan Agreement became exercisable upon issuance and will remain exercisable for five years until the earlier of October 19, 2020 or the closing of a merger consolidation transaction in which the Company is not the surviving entity.

The Loan Agreement contains customary representations and warranties and customary affirmative and negative covenants applicable to the Company and its subsidiaries, including, among other things, restrictions on dispositions, changes in business, management, ownership or business locations, mergers or acquisitions, indebtedness, encumbrances, distributions, investments, transactions with affiliates and subordinated debt. The Agreement also includes customary events of default, including but not limited to the nonpayment of principal or interest, violations of covenants, material adverse changes, attachment, levy, restraint on business, cross-defaults on material indebtedness, bankruptcy, material judgments, misrepresentations, subordinated debt, governmental approvals, lien priority and delisting. Upon an event of default, the Lenders may, among other things, accelerate the loans and foreclose on the collateral. The Company's obligations under the Agreement are secured by substantially all of the Company's current and future assets, other than its intellectual property.

The Company recorded interest expense related to the long term debt of $0.3 million for the year ended December 31, 2015. Included in interest expense for this period was interest on principal, amortization of the debt discount and debt issuance costs, and the accretion of the final exit fee. For the year ended December 31, 2015, the effective interest rate on the amounts borrowed under the Agreement, including the amortization of the debt discount and issuance cost, and the accretion of the final payment, was 9.3%.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Future minimum payments under the Loan, as of December 31, 2015 are as follows (in thousands):

2016	$ 1,145
2017	2,385
2018	5,872
2019	5,491
2020	4,468
Total minimum payments	19,361
Less: Interest and final payment	(4,361)
Notes payable, gross	$15,000

Note 10 — Commitments and Contingencies

Commitments

The Company leases office space and equipment under a non-cancelable operating lease that expires in 2018, with an option to extend the lease for an additional three-year period. The lease terms provide for rental payments on a graduated scale and the Company's payment of certain operating expenses. The Company recognizes rent expense on a straight-line basis over the lease period.

Rent expense was as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Rent expense	$3,297	$3,338	$3,306

As of December 31, 2015, future minimum lease payments under noncancelable operating leases were as follows (in thousands):

2016	$3,504
2017	3,626
2018	1,860
2019	—
2020	—
Thereafter	—
Total	$8,990

Contingencies

In the ordinary course of business, the Company may provide indemnifications of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of the Company's breach of such agreements, services to be provided by or on behalf of the Company, or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with its directors and certain of its officers and employees that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. The Company maintains director and officer

insurance, which may cover certain liabilities arising from its obligation to indemnify its directors and certain of its officers and employees, and former officers and directors in certain circumstances. The Company maintains product liability insurance and comprehensive general liability insurance, which may cover certain liabilities arising from its indemnification obligations. It is not possible to determine the maximum potential amount of exposure under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular indemnification obligation. Such indemnification obligations may not be subject to maximum loss clauses. Management is not currently aware of any matters that could have a material adverse effect on the financial position, results of operations or cash flows of the Company.

In December 2014, the Company filed a lawsuit alleging fraudulent inducement, breach of contract and negligence on the part of a data management vendor for a clinical trial. The Company is seeking monetary damages. As this is a contingency that may result in a gain, no provision has been made in the financial statements.

Note 11 — Convertible Preferred Stock

On April 18, 2011, the Company entered into a securities purchase agreement (the "Deerfield Agreement") with Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited (collectively, "Deerfield"). On April 20, 2011, pursuant to the Deerfield Agreement, the Company issued to Deerfield 8,070 shares of Series A convertible preferred stock (the "Series A Preferred Stock") for a purchase price of $1,500.00 per share for net proceeds of approximately $9.3 million, as well as common stock and warrants that are discussed in Note 12 — Stockholders' Equity.

The fair value of the common stock into which the Series A Preferred Stock was convertible exceeded the allocated purchase price of the Series A Preferred Stock by $2.9 million on the date of issuance, resulting in a beneficial conversion feature. The Company recognized the beneficial conversion feature as a one-time, non-cash, deemed dividend to the holders of Series A Preferred Stock on the date of issuance, which is the date the stock first became convertible.

On September 26, 2012, all 8,070 shares of Series A Preferred Stock were converted into 1,345,000 shares of our common stock. The conversion was in accordance with the terms of the agreement with Deerfield under which the Series A Preferred Stock was issued in 2011.

On June 20, 2012, the Company entered into underwriting agreements for two separate, concurrent public offerings of the Company's securities (the "June 2012 Public Offerings"). On June 25, 2012, pursuant to the underwriting agreements, in aggregate the Company issued to certain investors 23,026 shares of Series B convertible preferred stock (the "Series B Preferred Stock") for a purchase price of $760.00 per share, for net proceeds of approximately $12.3 million.

Each share of Series B Preferred Stock was convertible into common stock at any time at the holder's option. However, the holder was prohibited from converting the Series B Preferred Stock into shares of common stock if, as a result of such conversion, the holder and its affiliates would own more than 9.98% of the total number of shares of common stock then issued and outstanding. In the event of the Company's liquidation, dissolution, or winding up, holders of Series B Preferred Stock would receive a payment equal to $0.001 per share before any proceeds are distributed to the common stockholders. Shares of Series B Preferred Stock generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series B Preferred Stock is required to amend the terms of the Series B Preferred Stock. Holders

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of Series B Preferred Stock were not entitled to receive any dividends, unless and until specifically declared by the Company's board of directors. The Series B Preferred Stock ranked senior to the Company's common stock as to distributions of assets upon the Company's liquidation, dissolution or winding up, whether voluntarily or involuntarily. The Series B Preferred Stock may have ranked senior to, on parity with or junior to any class or series of the Company's capital stock created in the future depending upon the specific terms of such future stock issuance. As a result of the one-for-six reverse stock split effected in June 2013, the conversion ratio for Series B convertible preferred stock changed from 1,000 shares of common stock per share of Series B convertible preferred stock to 166.67 shares of common stock per share of Series B convertible preferred stock.

The fair value of the common stock into which the Series B Preferred Stock is convertible exceeded the allocated purchase price of the Series B Preferred Stock by $1.3 million on the date of issuance, resulting in a beneficial conversion feature. The Company recognized the beneficial conversion feature as a one-time, non-cash, deemed dividend to the holders of Series B Preferred Stock on the date of issuance, which is the date the stock first became convertible.

In the first quarter of 2013, 4,000 shares of Series B convertible preferred stock were converted into 666,667 shares of common stock. In the second quarter of 2013, 15,026 shares of Series B convertible preferred stock were converted into 2,504,334 shares of common stock. On July 2, 2013, 4,000 shares of Series B convertible preferred stock, which represented all remaining shares of Series B convertible preferred stock, were converted into 666,681 shares of common stock. The conversions were in accordance with the terms of the original agreement under which the Series B convertible preferred stock was issued in 2012.

As of December 31, 2015 and 2014, respectively, there were 10,000,000 shares of preferred stock authorized and no shares outstanding.

Note 12 — Stockholders' Equity

Accumulated Other Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Other comprehensive income (loss) is comprised of unrealized holding gains and losses on the Company's available-for-sale securities that are excluded from net loss and reported separately in stockholders' equity.

In 2015 and 2014, the Company recorded insignificant amounts of unrealized gains (losses) in available-for-sale securities in accumulated other comprehensive loss.

Authorized Shares

In June 2013, upon the stockholder approval of the one-for-six reverse stock split and the amendment to the Company's amended and restated certificate of incorporation, the number of authorized shares of common stock was reduced to 81,500,000 (See Note 1).

Common Stock Outstanding

In June 2011, the Company entered into an At-The-Market Issuance Sales Agreement (the "MLV Agreement") with McNicoll, Lewis & Vlak LLC ("MLV"), pursuant to which the Company sold, through December 31, 2014, 2,397,278 shares of common stock through MLV for net proceeds of approximately $15.2 million.

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On June 25, 2012, pursuant to the June 2012 Public Offerings, in aggregate the Company issued to various investors (i) 9,320,176 shares of common stock for a purchase price of $4.56 per share, (ii) 23,026 shares of the Series B Preferred Stock for a purchase price of $760.00 per share, and (iii) warrants to purchase 7,894,704 shares of the Company's common stock at an exercise price of $5.28 per share, for aggregate gross proceeds of approximately $60.0 million. After issuance costs of approximately $4.0 million, the net proceeds from the June 2012 Public Offerings were approximately $56.0 million. Through December 31, 2015, the Company issued 5,576,048 shares of common stock related to exercises of warrants in accordance with the June 2012 Public Offerings.

In conjunction with the Amgen Agreement Amendment (see Note 7), in June 2013, Amgen purchased 1,404,100 shares of the Company's common stock at a price per share of $7.12 and an aggregate purchase price of $10.0 million, which was received in June 2013. Under the terms of this agreement, Amgen agreed to certain trading and other restrictions with respect to the Company's common stock. The Company determined the fair value of the stock issued to Amgen to be $7.5 million. The excess of cash received over fair value of $2.5 million was deferred and is being allocated between the license and services based on their relative selling prices using best estimate of selling price.

In February 2014, the Company closed an underwritten public offering for the issuance and sale of 5,031,250 shares of its common stock. The gross public offering proceeds were approximately $40.3 million. The net proceeds from the sale of the shares were approximately $37.5 million, after deducting the underwriting discount and offering expenses.

In December 2014, the Company also entered into a common stock purchase agreement which provided for the sale of 2,040,816 shares of its common stock to Astellas at a price per share of $4.90 and an aggregate purchase price of $10.0 million, which was received in December 2014.

On September 4, 2015, the Company entered into an Committed Equity Offering (an "CE Offering") that is an at-the-market issuance sales agreement (the "Cantor Fitzgerald Agreement") with Cantor Fitzgerald & Co. ("Cantor Fitzgerald"), pursuant to which the Company may issue and sell shares of common stock having an aggregate offering price of up to $40.0 million, from time to time through Cantor Fitzgerald as its sales agent. The issuance and sale of these shares by the Company under the Cantor Fitzgerald Agreement, if any, are subject to the continued effectiveness of its registration statement on Form S-3, which was declared effective by the SEC on September 17, 2015 (File No. 333-206795).

Sales of the Company's common stock, through Cantor Fitzgerald, will be made on The NASDAQ Global Market by means of ordinary brokers' transactions at market prices or as otherwise agreed to by the Company and Cantor Fitzgerald. Subject to the terms and conditions of the Cantor Fitzgerald Agreement, Cantor Fitzgerald will use commercially reasonable efforts to sell the Company's common stock from time to time, based upon our instructions (including any price, time or size limits or other customary parameters or conditions we may impose). The Company is not obligated to make any sales of common stock under the Cantor Fitzgerald Agreement. The offering of shares of common stock pursuant to the Cantor Fitzgerald Agreement will terminate upon the earlier of (1) the sale of all common stock subject to the Cantor Fitzgerald Agreement or (2) termination of the Cantor Fitzgerald Agreement. The Cantor Fitzgerald Agreement may be terminated by Cantor Fitzgerald at any time upon ten days notice to the Company or may be terminated by the Company at any time upon five day' s notice to Cantor Fitzgerald, or by Cantor Fitzgerald at any time in certain circumstances, including the occurrence of a material adverse change in the Company's business. The Company will pay Cantor Fitzgerald a commission rate equal to 3.0% of the gross proceeds of the sales price per share of any common stock sold through Cantor Fitzgerald under the Cantor Fitzgerald Agreement. The Company has also provided Cantor

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Fitzgerald with customary indemnification and contribution rights. As of December 31, 2015, 808,193 shares have been issued through Cantor Fitzgerald under the Cantor Fitzgerald Agreement for total net proceeds of approximately $8.7 million.

Warrants

On April 20, 2011, pursuant to the Deerfield Agreement, the Company issued to Deerfield warrants to purchase 1,114,168 shares of the Company's common stock at an initial exercise price of $9.90 per share, for aggregate gross proceeds of approximately $4.5 million. After issuance costs of approximately $0.1 million, the net proceeds were approximately $4.4 million. The warrants issued to Deerfield expired unexercised on April 20, 2015.

On June 25, 2012, pursuant to the June 2012 Public Offerings, the Company issued warrants to purchase 7,894,704 shares of the Company's common stock at an exercise price of $5.28 per share, for an aggregate gross proceeds of approximately $14.7 million. The warrant holders are prohibited from exercising the warrants and obtaining shares of common stock if, as a result of such exercise, the holder and its affiliates would own more than 9.98% of the total number of shares of the Company's common stock then issued and outstanding. The Company valued the warrants as of the date of issuance at $16.2 million using the Black-Scholes option pricing model and the following assumptions: a contractual term of five years, a risk-free interest rate of 0.73%, volatility of 76%, and the fair value of the Company's common stock on the issuance date of $3.78.

In 2013, the Company issued 359,460 shares of common stock related to exercises of warrants in accordance with the June 2012 Public Offerings.

In October 2015, warrants to purchase 65,189 shares of the Company's common stock at an exercise price of $6.90 per share were issued in accordance with the Loan Agreement. The Company valued the warrants as of the date of issuance at $282,000 using the Black-Scholes option pricing model and the following assumptions: a contractual term of five years, a risk-free interest rate of 1.9%, volatility of 75%, and the fair value of the Company's common stock of $6.90.

Outstanding warrants as of December 31, 2015 were as follows:

	Number of Shares	Exercise Price	Expiration Date
Issued 6/25/2012	5,576,048	$ 5.28	06/25/17
Issued 10/19/2015	65,189	$ 6.90	10/19/20

In February 2016, warrants to purchase 68,285 shares of the Company's common stock at an exercise price of $6.59 per share were issued in accordance with the Loan Agreement. Refer to Note 16 for further details.

Stock Option Plans

2004 Plan

In January 2004, the Board of Directors adopted the 2004 Equity Incentive Plan (the "2004 Plan"), which was approved by the stockholders in February 2004. The 2004 Plan provides for the granting of incentive stock options, nonstatutory stock options, restricted stock, stock appreciation rights, stock performance units and stock performance shares to employees, directors and consultants. Under the 2004 Plan, options may be granted at prices not lower than 100% of the fair market value of the common stock on the date of grant for nonstatutory

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stock options and incentive stock options and may be granted for terms of up to ten years from the date of grant. Options granted to new employees generally vest 25% after one year and monthly thereafter over a period of four years. Options granted to existing employees generally vest monthly over a period of four years. At the May 2013 Annual Meeting of Stockholders, the number of shares of common stock authorized for issuance under the 2004 Plan was increased by 2,000,000. At the May 2015 Annual Meeting of Stockholders, the number of shares of common stock authorized for issuance under the 2004 Plan was increased by 3,130,000. As of December 31, 2015, there were 2,816,010 shares of common stock reserved for issuance under the 2004 Plan.

Stock Options

Activity under the equity incentive plan was as follows:

	Shares Available for Grant of Option or Award	Stock Options Outstanding	Weighted Average Exercise Price per Share - Stock Options	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (in thousands)
Balance at December 31, 2012	878,726	1,790,527	18.96		
Increase in authorized shares	2,000,000	—	—		
Options granted	(797,629)	797,629	5.95		
Restricted stock units granted	(41,661)	—	—		
Options exercised	—	(21,397)	5.32		
Options forfeited/expired	117,394	(117,394)	12.55		
Restricted stock units forfeited	4,999	—	—		
Balance at December 31, 2013	2,161,829	2,449,365	$ 15.15		
Options granted	(944,831)	944,831	8.80		
Restricted stock units granted	(43,500)	—	—		
Options exercised	—	(390)	6.00		
Options forfeited/expired	95,980	(95,980)	39.74		
Restricted stock units forfeited	1,000	—	—		
Balance at December 31, 2014	1,270,478	3,297,826	$ 12.62		
Increase in authorized shares	3,130,000	—	—		
Options granted	(1,175,730)	1,175,730	7.62		
Restricted stock units granted	(739,000)	—	—		
Options exercised	—	(68,635)	6.22		
Options forfeited/expired	326,762	(326,762)	16.83		
Restricted stock units forfeited	3,500	—	—		
Balance at December 31, 2015	2,816,010	4,078,159	$ 10.94	6.73	$ 9,224
Exercisable at December 31, 2015		2,634,070	$ 12.60	5.67	$ 5,551
Vested and expected to vest as of December 31, 2015		4,078,159	$ 10.94	6.73	$ 9,224

Total intrinsic value of stock options exercised was $94,000, $1,000, and $107,000 during the years ended December 31, 2015, 2014 and 2013, respectively. The intrinsic value is calculated as the difference between the market value at the date of exercise and the exercise price of the shares. The market value as of December 31, 2015 was $10.46 per share as reported by NASDAQ. The weighted average grant date fair value of stock options granted was $5.35, $6.01 and $3.85 per share during the years ended December 31, 2015, 2014 and 2013, respectively.

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The number of option shares vested was 713,078, 601,647 and 457,465 in 2015, 2014 and 2013, respectively. The grant date fair value of option shares vested was $3.6 million, $3.0 million and $2.3 million in 2015, 2014 and 2013, respectively. The Company has revised the previously reported disclosures of option shares vested and grant date fair value of option shares vested for the year ended December 31, 2013. The corrections had no effect upon the statements of comprehensive loss amounts.

Restricted Stock Units

Restricted stock unit activity was as follows:

	Number of Shares	Weighted Average Award Date Fair Value per Share
Restricted stock units outstanding at December 31, 2012	216,898	$ 6.78
Restricted stock units granted	41,661	6.00
Restricted stock units vested	(211,897)	6.78
Restricted stock units forfeited	(4,999)	6.78
Unvested restricted stock units outstanding at December 31, 2013	41,663	6.00
Restricted stock units granted	43,500	9.65
Restricted stock units vested	(20,833)	6.00
Restricted stock units forfeited	(1,000)	6.00
Unvested restricted stock units outstanding at December 31, 2014	63,330	8.51
Restricted stock units granted	54,000	7.96
Restricted stock units vested	(42,078)	7.82
Restricted stock units forfeited	(3,500)	8.68
Unvested restricted stock units outstanding at December 31, 2015	71,752	8.49

Restricted stock activities were limited to non-executive employees for year ended December 31, 2015.

For the years ended December 31, 2015, 2014 and 2013, the total fair value of restricted stock units vested was $0.3 million, $0.1 million and $1.4 million, respectively. The Company measures compensation expense for restricted stock units at fair value on the grant date and recognizes the expense over the expected vesting period. The fair value for restricted stock units is based on the closing price of the Company's common stock on the grant date. Unvested restricted stock awards are subject to repurchase at no cost to the Company.

Restricted Stock Units that Contain Performance Conditions

Performance stock unit activity was as follows:

	Number of Shares	Weighted Average Award Date Fair Value per Share
Performance stock units outstanding at December 31, 2014	—	$ —
Restricted stock units granted	685,000	7.00
Restricted stock units vested	—	—
Restricted stock units forfeited	—	—
Unvested restricted stock units outstanding at December 31, 2015	685,000	$ 7.00

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During the year ended December 31, 2015, the Company granted 685,000 performance stock unit awards with a grant date fair value of $7.00 per share that contain performance conditions. As of December 31, 2015, all these performance stock units remain unvested.

No performance stock units vested during the years ended December 31, 2015, 2014 and 2013 respectively. The Company measures compensation expense for performance stock units at fair value on the grant date and recognizes the expense over the expected vesting period once it is probable that the performance conditions will be achieved. The fair value for performance stock units is based on the closing price of the Company's common stock on the grant date. Unvested performance stock awards are subject to repurchase at no cost to the Company.

Stock-Based Compensation

The Company applies the accounting guidance for stock compensation, which establishes accounting for share-based payment awards made to employees, non-employees and directors, including employee stock options and employee stock purchases. Under this guidance, stock-based compensation cost is measured at the grant date based on the calculated fair value of the award, and is recognized as an expense on a straight-line basis over the employee's requisite service period, generally the vesting period of the award.

The following table summarizes stock-based compensation related to stock options, restricted stock awards, restricted stock unit, and employee stock purchases (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Research and development	$1,828	$1,361	$1,538
General and administrative	2,739	1,969	2,059
Stock-based compensation included in operating expenses	$4,567	$3,330	$3,597

Valuation Assumptions

Employee Stock-Based Compensation

The Company uses the Black-Scholes option pricing model to determine the fair value of stock option grants to employees and directors and employee stock purchase plan shares. The key input assumptions used to estimate fair value of these awards include the exercise price of the award, the expected option term, the expected volatility of the Company's stock over the option's expected term, the risk-free interest rate over the option's expected term, and the Company's expected dividend yield, if any.

The fair value of share-based payments was estimated on the date of grant using the Black-Scholes option pricing model based on the following weighted average assumptions:

	Year Ended December 31, 2015		Year Ended December 31, 2014		Year Ended December 31, 2013	
	Employee Stock Options	ESPP	Employee Stock Options	ESPP	Employee Stock Options	ESPP
Risk-free interest rate	1.7%	0.3%	1.9%	0.2%	1.1%	0.2%
Volatility	79.4%	75.3%	77.1%	86.0%	73.2%	74.6%
Expected term in years	6.38	0.56	6.30	1.25	6.20	1.25
Expected dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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The risk-free interest rate that the Company uses in the option pricing model is based on the U.S. Treasury zero-coupon issues with remaining terms similar to the expected terms of the options. The Company does not anticipate paying dividends in the foreseeable future and therefore uses an expected dividend yield of zero in the option pricing model. The Company is required to estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. Historical data is used to estimate pre-vesting option forfeitures and record stock-based compensation expense only on those awards that are expected to vest.

The Company uses its own historical exercise activity and extrapolates the life cycle of options outstanding to arrive at its estimated expected term for new option grants. The Company uses its own volatility history based on its stock's trading history for the period subsequent to the Company's initial public offering in April 2004. The Company measures compensation expense for awards of restricted stock and restricted stock units at fair value on the date of grant and recognizes the expense over the expected vesting period. The fair value for restricted stock and restricted stock unit awards is based on the closing price of the Company's common stock on the date of grant.

As of December 31, 2015, there was $7.7 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted-average period of 2.5 years, and there was $4.8 million of unrecognized compensation cost related to unvested restricted stock and performance stock units, which is expected to be recognized over a weighted-average period of 2.1 years. The fair value for restricted stock units is based on the closing price of the Company's common stock on the grant date.

Non-employee Stock-Based Compensation

The Company records stock option grants to non-employees, excluding directors, at their fair value on the measurement date. The measurement of stock-based compensation is subject to adjustment as the underlying equity instruments vest.

There were no stock option grants to non-employees in the years ended December 31, 2015, 2014 or 2013. When terminating, if employees continue to provide service to the Company as consultants and their grants are permitted to continue to vest, the expense associated with the continued vesting of the related stock options is classified as non-employee stock compensation expense after the status change.

In connection with services rendered by non-employees, the Company recorded stock-based compensation expense of $27,000, $50,000, and $104,000 in 2015, 2014 and 2013, respectively.

ESPP

In January 2004, the Board of Directors adopted the 2004 ESPP, which was approved by the stockholders in February 2004. Under the 2004 ESPP, statutory employees may purchase common stock of the Company up to a specified maximum amount through payroll deductions. The stock is purchased semi-annually at a price equal to 85% of the fair market value at certain plan-defined dates. The 2004 ESPP was terminated in October 2015.

In May 2015, the Board of Directors adopted the 2015 ESPP, which was approved by the stockholders in May 2015. The first purchase period under the 2015 ESPP commenced on November 2, 2015. Under the 2015 ESPP, statutory employees may purchase common stock of the Company up to a specified maximum amount through payroll deductions. The stock is purchased semi-annually at a price equal to 85% of the fair market value at certain plan-defined dates.

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The Company issued 21,167, 19,726 and 14,985 shares of common stock during 2015, 2014 and 2013, respectively, pursuant to the 2004 ESPP at an average price of $3.24, $3.38 and $3.66 per share, in 2015, 2014 and 2013, respectively.

At December 31, 2015 the Company had 649,003 shares of common stock reserved for issuance under the 2015 ESPP.

Note 13 — Income Taxes

The Company accounts for income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce the deferred tax assets to the amounts expected to be realized. The Company did not record an income tax provision in the years ended December 31, 2015, 2014, or 2013 because the Company had a net taxable loss in the period.

For financial statement purposes, loss before taxes includes the following components (in thousands):

	Years Ended December 31,		
	2015	2014	2013
United States	$(37,501)	$(14,646)	$(33,717)
Foreign	—	—	—
Total	$(37,501)	$(14,646)	$(33,717)

The Company recorded the following income tax provision as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Current:			
Federal	$—	$—	$—
State	—	—	—
Total	$—	$—	$—
Deferred:			
Federal	$—	$—	$—
State	—	—	—
Total	$—	$—	$—

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Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The significant components of the Company's deferred tax assets and liabilities were as follows (in thousands):

	As of December 31,		
	2015	2014	2013
Deferred tax assets:			
Depreciation and amortization	$ 769	$ 780	$ 918
Capitalized R&D	13,150	15,176	20,702
Reserves and accruals	12,899	6,217	4,946
Net operating losses	153,251	148,184	144,254
Tax credits	38,742	34,543	33,043
Total deferred tax assets	218,811	204,900	203,863
Less: Valuation allowance	(218,811)	(204,900)	(203,863)
Net deferred tax assets	$ —	$ —	$ —

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Based upon the weight of available evidence, which includes the Company's historical operating performance, reported cumulative net losses since inception, expected future losses, and difficulty in accurately forecasting the Company's future results, the Company maintained a full valuation allowance on the net deferred tax assets as of December 31, 2015, 2014 and 2013. The valuation allowance was determined pursuant to the accounting guidance for income taxes, which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. The Company intends to maintain a full valuation allowance on the U.S. deferred tax assets until sufficient positive evidence exists to support reversal of the valuation allowance. The valuation allowance increased by $13.9 million in 2015, $1.0 million in 2014 and $13.7 million in 2013.

As a result of certain realization requirements of accounting guidance for stock compensation, the table of deferred tax assets and liabilities shown above does not include certain deferred tax assets at December 31, 2015, 2014 and 2013 that arose directly from tax deductions related to equity compensation in excess of compensation recognized for financial reporting. Approximately $2.0 million of Federal and California net operating losses are related to tax stock option deductions in excess of book deductions. This amount will be credited to stockholders' equity when it is realized.

The following are the Company's valuation and qualifying accounts (in thousands):

	Balance at Beginning of Period	Charged to Expenses	Charged to Other Accounts	Deductions	Balance at End of Period
Year Ended December 31, 2013:					
Deferred tax valuation allowance	$ 190,193	$ 13,670	—	—	$ 203,863
Year Ended December 31, 2014:					
Deferred tax valuation allowance	$ 203,863	$ 1,037	—	—	$ 204,900
Year Ended December 31, 2015:					
Deferred tax valuation allowance	$ 204,900	$ 13,911	—	—	$ 218,811

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The following is a reconciliation of the statutory federal income tax rate to the Company's effective tax rate:

	Years Ended December 31,		
	2015	2014	2013
Tax at federal statutory tax rate	(34)%	(34)%	(34)%
State income tax, net of federal tax benefit	0%	(1)%	(4)%
State Apportionment	0%	28%	7%
Tax credits (net)	(7)%	(7)%	(14)%
Deferred tax assets (utilized) not benefited	37%	7%	41%
Stock-based compensation	2%	5%	2%
NOL Expiration	2%	2%	1%
Other	0%	0%	1%
Total	0%	0%	0%

The Company had federal net operating loss carryforwards of approximately $403.1 million and apportioned state net operating loss carryforwards of approximately $275 million before federal benefit at December 31, 2015. If not utilized, the federal and state operating loss carryforwards will begin to expire in various amounts beginning 2020 and 2016, respectively. The net operating loss carryforwards include deductions for stock options.

The Company had general business credit of approximately $35.4 million and $13.5 million for federal and state income tax purposes, respectively, at December 31, 2015. Amounts are comprised of Research and Development Credits and Orphan Drug Credits. If not utilized, the federal carryforwards will expire in various amounts beginning in 2021. The California state credit can be carried forward indefinitely. Since its filing of its 2011 tax return, the Company has claimed the orphan drug credit. For qualifying expenses, the orphan drug credit offers an increased benefit relative to the research and development credit taken in years prior.

As required by California state law, the Company apportions income to California based on a "market-based" sourcing approach. Accordingly, the Company's California apportionment formula is sensitive to changes in the source of the Company's mix of revenue.

In general, under Section 382 of the Internal Revenue Code ("Section 382"), a corporation that undergoes an 'ownership change' is subject to limitations on its ability to utilize its pre-change net operating losses and tax credits to offset future taxable income. The Company has performed a section 382 analysis for the year ended December 31, 2015 and has not experienced an ownership change since 2006. A portion of the Company's existing net operating losses and tax credits are subject to limitations arising from previous ownership changes. Future changes in the Company's stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 and result in additional limitations.

Section 59(e) of the Internal Revenue Code allows a Company to capitalize R&D expenses. The Company elected to capitalize R&D expenses on its 2013 tax return after completing a reverse stock split in the second quarter of 2013. The Company did not elect to capitalize R&D expenses in its 2014 tax return as they did not anticipate an ownership change under Section 382. For 2015, the Company anticipates foregoing the election in its 2015 tax return as they do not anticipate an ownership change under Section 382.

The Company follows the accounting guidance that prescribes a comprehensive model for how companies should recognize, measure, present, and disclose in their financial statements uncertain tax positions taken or expected to be taken on a tax return. Tax positions are initially recognized in the financial statements when it is

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

more likely than not that the position will be sustained upon examination by the tax authorities. Such tax positions are initially and subsequently measured as the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement with the tax authority assuming full knowledge of the position and relevant facts.

The significant jurisdictions in which the Company files income tax returns are the United States and California. For jurisdictions in which tax filings are made, the Company is subject to income tax examination for all fiscal years since inception. The IRS's Large Business and International Division concluded its audit of the 2009 tax year with no material adjustments. However, in general, the statute of limitations for tax liabilities for all years remains open for the purpose of adjusting the amounts of the losses and credits carried forward from those years.

The following table summarizes the activity related to our gross unrecognized tax benefits (in thousands):

	Years Ended December 31,	
	2015	2014
Balance at the beginning of the year	$6,274	$6,171
Decrease related to prior year tax positions	0	(85)
Increase related to current year tax positions	441	188
Balance at the end of the year	$6,715	$6,274

Included in the balance of unrecognized tax benefits as of December 31, 2015, 2014 and 2013 are $5.5 million, $5.1 million and $5.0 million of tax benefits, respectively, that, if recognized, would result in adjustments to other tax accounts, primarily deferred taxes.

The Company recognizes interest accrued related to unrecognized tax benefits and penalties as income tax expense. Related to the unrecognized tax benefits noted above, the Company did not accrue any penalties or interest during 2015, 2014 or 2013. The Company does not expect its unrecognized tax benefit to change materially over the next twelve months.

Note 14 — Interest and Other, Net

Components of Interest and Other, Net were as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Interest income and other income	$ 156	$108	$177
Interest expense and other expense	(250)	—	—
Interest and Other, net	$ (94)	$108	$177

Interest income and other income in all periods primarily consisted of interest income generated from the Company's cash, cash equivalents and investments. In 2013, interest income also included net gains realized upon disposal of equipment.

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Interest expense in 2015 consisted mainly of interest under the loan agreement. Refer to Note 9 for further detail.

Note 15 — Quarterly Financial Data (Unaudited)

Quarterly results were as follows (in thousands, except per share data):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2015				
Total revenues	$ 4,414	$ 6,542	$ 7,945	$ 9,757
Net loss	(8,872)	(10,551)	(8,849)	(9,229)
Net income (loss) per share — basic and diluted	$ (0.23)	$ (0.27)	$ (0.23)	$ (0.24)
2014				
Total revenues	$ 7,979	$ 7,788	$ 9,415	$21,758
Net income (loss)	(8,744)	(8,374)	(5,971)	8,443
Net income (loss) per share — basic and diluted	$ (0.27)	$ (0.23)	$ (0.16)	$ 0.23

Note 16 — Subsequent Events

In February 2016, the Company drew down $15.0 million in funds under the existing Loan Agreement and issued warrants to purchase 68,285 shares of the Company's common stock at an exercise price of $6.59 per share under the second term loan, as described in Note 9 to these financial statements. The Company may at its sole discretion draw down the additional $10.0 million under the Loan Agreement in two term loans, provided certain specified conditions stipulated in the Loan Agreement are met preceding those draws. The expiration date of the remaining term loans of $10.0 million is March 2017. Refer to Note 9 for further details.

Item 9. ***Changes in and Disagreements With Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Evaluation of Disclosure Controls and Procedures. Our management evaluated, with the participation of our Chief Executive Officer and our Chief Financial Officer, the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective as of December 31, 2015.

Management's Report on Internal Control over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework 2013. Our management has concluded that, as of December 31, 2015, our internal control over financial reporting is effective based on these criteria.

Our independent registered public accounting firm, PricewaterhouseCoopers LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2015, as stated in their report, which is included herein.

Changes in Internal Control over Financial Reporting. There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls. Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls, will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within Cytokinetics have been detected.

Item 9B. ***Other Information***

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information regarding our directors and executive officers, our director nominating process and our audit committee is incorporated by reference from our definitive Proxy Statement for our 2016 Annual Meeting of Stockholders, where it appears under the headings "Board of Directors" and "Executive Officers."

Section 16(a) Beneficial Ownership Reporting Compliance

The information regarding our Section 16 beneficial ownership reporting compliance is incorporated by reference from our definitive Proxy Statement described above, where it appears under the headings "Section 16(a) Beneficial Ownership Reporting Compliance."

Code of Ethics

We have adopted a Code of Ethics that applies to all directors, officers and employees of the Company. We publicize the Code of Ethics through posting the policy on our website, www.cytokinetics.com. We will disclose on our website any waivers of, or amendments to, our Code of Ethics within four business days following the date of such amendment or waiver.

Item 11. *Executive Compensation*

The information required by this Item is incorporated by reference from our definitive Proxy Statement referred to in Item 10 above, where it appears under the headings "Executive Compensation" and "Compensation Committee Interlocks and Insider Participation."

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

The information required by this Item regarding security ownership of certain beneficial owners and management is incorporated by reference from our definitive Proxy Statement referred to in Item 10 above, where it appears under the heading "Security Ownership of Certain Beneficial Owners and Management."

The following table summarizes the securities authorized for issuance under our equity compensation plans as of December 31, 2015:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by stockholders	2,634,070	$ 12.60	3,465,013(1)
Equity compensation plans not approved by stockholders	—	—	—
Total	2,634,070	$ 12.60	3,465,013

(1) Includes 649,003 shares of common stock reserved for issuance under the Employee Stock Purchase Plan.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information required by this Item is incorporated by reference from our definitive Proxy Statement referred to in Item 10 above where it appears under the headings "Certain Business Relationships and Related Party Transactions" and "Board of Directors."

Item 14. *Principal Accounting Fees and Services*

The information required by this Item is incorporated by reference from our definitive Proxy Statement referred to in Item 10 above, where it appears under the heading "Principal Accountant Fees and Services."

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

(a) The following documents are filed as part of this Form 10-K:

(1) Financial Statements (included in Part II of this report):

- Report of Independent Registered Public Accounting Firm
- Consolidated Balance Sheets
- Consolidated Statements of Comprehensive Loss
- Consolidated Statements of Stockholders' Equity
- Consolidated Statements of Cash Flows
- Notes to Consolidated Financial Statements

(2) Financial Statement Schedules:

None — All financial statement schedules are omitted because the information is inapplicable or presented in the notes to the financial statements.

(3) Exhibits:

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
3.1	Amended and Restated Certificate of Incorporation.	S-3	333-174869	June 13, 2011	3.1	
3.2	Certificate of Amendment of Amended and Restated Certificate of Incorporation.	10-Q	000-50633	August 4, 2011	3.2	
3.3	Certificate of Amendment of Amended and Restated Certificate of Incorporation.	8-K	000-50633	June 25, 2013	5.1	
3.4	Amended and Restated Bylaws.	S-1	333-112261	April 29, 2004	3.2	
4.1	Specimen Common Stock Certificate.	10-Q	000-50633	May 9, 2007	4.1	
4.2	Registration Rights Agreement, dated as of December 29, 2006, by and between the Company and Amgen Inc.	8-K	000-50633	January 3, 2007	10.7	
4.3	Form of Warrant	10-Q	000-50633	August 6, 2012	4.6	
4.4	Form of Common Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.4	
4.5	Form of Preferred Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.5	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
4.6	Form of Common Stock Warrant Issued Pursuant to that certain Loan and Security Agreement, dated as of October 19, 2015, by and among the Company, Oxford Finance LLC and Silicon Valley Bank					X
10.1+	Amended and Restated 2004 Equity Incentive Plan	10-Q	000-50633	August 5, 2015	10.2	
10.2+	2004 Employee Stock Purchase Plan	10-Q	000-50633	August 7, 2013	10.3	
10.3+	2015 Employee Stock Purchase Plan	10-Q	000-50633	August 5, 2015	10.42	
10.4	Build-to-Suit Lease, dated May 27, 1997, by and between Britannia Pointe Grand Limited Partnership and Metaxen, LLC	S-1	333-112261	April 29, 2004	10.5	
10.5	First Amendment to Lease, dated April 13, 1998, by and between Britannia Pointe Grand Limited Partnership and Metaxen, LLC	S-1	333-112261	January 27, 2004	10.6	
10.6	Sublease Agreement, dated May 1, 1998, by and between the Company and Metaxen, LLC	S-1	333-112261	January 27, 2004	10.7	
10.7	Sublease Agreement, dated March 1, 1999, by and between Metaxen, LLC and Exelixis Pharmaceuticals, Inc.	S-1	333-112261	January 27, 2004	10.8	
10.8	Assignment and Assumption Agreement and Consent, dated July 11, 1999, by and among Exelixis Pharmaceuticals, Metaxen, LLC, Xenova Group PLC and Britannia Pointe Grande Limited Partnership	S-1	333-112261	January 27, 2004	10.9	
10.9	Second Amendment to Lease, dated July 11, 1999, by and between Britannia Pointe Grand Limited Partnership and Exelixis Pharmaceuticals, Inc.	S-1	333-112261	January 27, 2004	10.10	
10.10	First Amendment to Sublease Agreement, dated July 20, 1999, by and between the Company and Metaxen	S-1	333-112261	January 27, 2004	10.11	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.11	Agreement and Consent, dated July 20, 1999, by and among Exelixis Pharmaceuticals, Inc., the Company and Britannia Pointe Grand Limited Partnership	S-1	333-112261	January 27, 2004	10.12	
10.12	Amendment to Agreement and Consent, dated July 31, 2000, by and between the Company, Exelixis, Inc., and Britannia Pointe Grande Limited Partnership	S-1	333-112261	January 27, 2004	10.13	
10.13	Assignment and Assumption of Lease, dated September 28, 2000, by and between the Company and Exelixis, Inc.	S-1	333-112261	January 27, 2004	10.14	
10.14	Sublease Agreement, dated September 28, 2000, by and between the Company and Exelixis, Inc.	S-1	333-112261	January 27, 2004	10.15	
10.15*	Collaboration and Option Agreement, dated as of December 29, 2006, by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2007	10.63	
10.16	Form of Indemnification Agreement between the Company and each of its directors and executive officers	10-Q	000-50633	August 5, 2008	10.1	
10.17*+	Scientific Advisory Board Consulting Agreement, dated April 1, 2008, by and between the Company and James H. Sabry	8-K	000-50633	April 2, 2008	10.66	
10.18+	Amended and Restated Executive Employment Agreement, dated May 21, 2007, by and between the Company and Robert Blum	10-Q	000-50633	August 5, 2008	10.69	
10.19+	Form of Executive Employment Agreement between the Company and its executive officers	10-Q	000-50633	August 5, 2008	10.68	
10.20*	Amendment No. 1, dated June 17, 2008, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.62	
10.21*	Amendment No. 2, dated September 30, 2008, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.63	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.22*	Amendment No. 3, dated October 31, 2008, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.65	
10.23*	Amendment No. 4, dated February 20, 2009, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.67	
10.24+	Form of Amendment No. 1 to Amended and Restated Executive Employment Agreements	10-K	000-50633	March 12, 2009	10.68	
10.25	Third Amendment to Lease, dated December 10, 2010, by and between the Company and Britannia Pointe Grand Limited Partnership	10-K	000-50633	March 11, 2011	10.65	
10.26*	Amendment No. 5, dated November 1, 2010, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 11, 2011	10.66	
10.27*	Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011	10-K	000-50633	March 13, 2012	10.42	
10.28*	Amendment No. 1, dated May 1, 2012, to Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011	10-Q	000-50633	May 4, 2012	10.43	
10.29*	Amendment No. 2, dated October 30, 2012 to Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011	10-K	000-50633	March 15, 2013	10.44	
10.30+	2015 Compensation Information for the Company's Named Executive Officers	8-K	000-50633	March 2, 2015	10.1	
10.31+	Form of Option Agreement	10-K	000-50633	March 15, 2013	10.46	
10.32+	Form of Restricted Stock Unit Award Agreement	10-K	000-50633	March 15, 2013	10.47	
10.33	Common Stock Purchase Agreement dated June 11, 2013, by and between the Company and Amgen, Inc.	8-K	000-50633	June 12, 2013	10.48	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.34*	Amendment No. 6, dated June 11, 2013, to the Collaboration and Option Agreement by and between the Company and Amgen, Inc.	10-Q	000-50633	August 7, 2013	10.46	
10.35+	Form of Executive Employment Agreement between the Company and its executive officers	10-K	000-50633	March 7, 2014	10.39	
10.36	Common Stock Purchase Agreement by and between the Company and Astellas Pharma Inc. dated December 22, 2014	8-K	000-50633	December 23, 2014	10.46	
10.37*	Amended and Restated License and Collaboration Agreement, dated December 22, 2014, by and between the Company and Astellas Pharma Inc.	10-K	000-50633	March 6, 2015	10.40	
10.38*	Amendment No. 7, dated March 19, 2015, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-Q	000-50633	May 4, 2015	10.41	
10.39	Controlled Equity Offering Sales Agreement, dated as of September 4, 2015, by and between the Company and Cantor Fitzgerald & Co.	8-K	000-50633	September 4, 2015	10.43	
10.40**	Loan and Security Agreement, dated as of October 19, 2015, by and among the Company, Oxford Finance LLC and Silicon Valley Bank					X
23.1	Consent of Independent registered public accounting firm					X
24.1	Power of Attorney (included in the signature page to this report)					X
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
32.1	Certifications of the Principal Executive Officer and the Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350)(1)					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

* Portions of this Exhibit are subject to a confidential treatment order.

** Registrant has requested confidential treatment for portions of this Exhibit.

\+ Management contract or compensatory plan.

(1) This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

(b) Exhibits

The exhibits listed under Item 15(a)(3) hereof are filed as part of this Form 10-K, other than Exhibit 32.1 which shall be deemed furnished.

(c) Financial Statement Schedules

None — All financial statement schedules are omitted because the information is inapplicable or presented in the notes to the financial statements.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CYTOKINETICS, INCORPORATED

By: /S/ ROBERT I. BLUM
Robert I. Blum
President, Chief Executive Officer and Director

Dated: March 3, 2016

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert I. Blum and Sharon A. Barbari, and each of them, his true and lawful attorneys-in-fact, each with full power of substitution, for him in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact or their substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ ROBERT I. BLUM Robert I. Blum	President, Chief Executive Officer and Director (Principal Executive Officer)	March 3, 2016
/s/ SHARON A. BARBARI Sharon A. Barbari	Executive Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Executive)	March 3, 2016
/s/ L. PATRICK GAGE, PH.D. L. Patrick Gage, Ph.D.	Chairman of the Board of Directors	March 3, 2016
/s/ SANTO J. COSTA Santo J. Costa	Director	March 3, 2016
/s/ JOHN T. HENDERSON, M.B. CH.B. John T. Henderson, M.B. Ch.B.	Director	March 3, 2016
/s/ B. LYNNE PARSHALL, ESQ. B. Lynne Parshall, Esq.	Director	March 3, 2016
/s/ SANDFORD D. SMITH Sandford D. Smith	Director	March 3, 2016
/s/ WENDELL WIERENGA, PH.D. Wendell Wierenga, Ph.D.	Director	March 3, 2016

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
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3.1	Amended and Restated Certificate of Incorporation.	S-3	333-174869	June 13, 2011	3.1	
3.2	Certificate of Amendment of Amended and Restated Certificate of Incorporation.	10-Q	000-50633	August 4, 2011	3.2	
3.3	Certificate of Amendment of Amended and Restated Certificate of Incorporation.	8-K	000-50633	June 25, 2013	5.1	
3.4	Amended and Restated Bylaws.	S-1	333-112261	April 29, 2004	3.2	
4.1	Specimen Common Stock Certificate.	10-Q	000-50633	May 9, 2007	4.1	
4.2	Registration Rights Agreement, dated as of December 29, 2006, by and between the Company and Amgen Inc.	8-K	000-50633	January 3, 2007	10.7	
4.3	Form of Warrant	10-Q	000-50633	August 6, 2012	4.6	
4.4	Form of Common Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.4	
4.5	Form of Preferred Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.5	
4.6	Form of Common Stock Warrant Issued Pursuant to that certain Loan and Security Agreement, dated as of October 19, 2015, by and among the Company, Oxford Finance LLC and Silicon Valley Bank					X
10.1+	Amended and Restated 2004 Equity Incentive Plan	10-Q	000-50633	August 5, 2015	10.2	
10.2+	2004 Employee Stock Purchase Plan	10-Q	000-50633	August 7, 2013	10.3	
10.3+	2015 Employee Stock Purchase Plan	10-Q	000-50633	August 5, 2015	10.42	
10.4	Build-to-Suit Lease, dated May 27, 1997, by and between Britannia Pointe Grand Limited Partnership and Metaxen, LLC	S-1	333-112261	April 29, 2004	10.5	
10.5	First Amendment to Lease, dated April 13, 1998, by and between Britannia Pointe Grand Limited Partnership and Metaxen, LLC	S-1	333-112261	January 27, 2004	10.6	
10.6	Sublease Agreement, dated May 1, 1998, by and between the Company and Metaxen, LLC	S-1	333-112261	January 27, 2004	10.7	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.7	Sublease Agreement, dated March 1, 1999, by and between Metaxen, LLC and Exelixis Pharmaceuticals, Inc.	S-1	333-112261	January 27, 2004	10.8	
10.8	Assignment and Assumption Agreement and Consent, dated July 11, 1999, by and among Exelixis Pharmaceuticals, Metaxen, LLC, Xenova Group PLC and Britannia Pointe Grande Limited Partnership	S-1	333-112261	January 27, 2004	10.9	
10.9	Second Amendment to Lease, dated July 11, 1999, by and between Britannia Pointe Grand Limited Partnership and Exelixis Pharmaceuticals, Inc.	S-1	333-112261	January 27, 2004	10.10	
10.10	First Amendment to Sublease Agreement, dated July 20, 1999, by and between the Company and Metaxen	S-1	333-112261	January 27, 2004	10.11	
10.11	Agreement and Consent, dated July 20, 1999, by and among Exelixis Pharmaceuticals, Inc., the Company and Britannia Pointe Grand Limited Partnership	S-1	333-112261	January 27, 2004	10.12	
10.12	Amendment to Agreement and Consent, dated July 31, 2000, by and between the Company, Exelixis, Inc., and Britannia Pointe Grande Limited Partnership	S-1	333-112261	January 27, 2004	10.13	
10.13	Assignment and Assumption of Lease, dated September 28, 2000, by and between the Company and Exelixis, Inc.	S-1	333-112261	January 27, 2004	10.14	
10.14	Sublease Agreement, dated September 28, 2000, by and between the Company and Exelixis, Inc.	S-1	333-112261	January 27, 2004	10.15	
10.15*	Collaboration and Option Agreement, dated as of December 29, 2006, by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2007	10.63	
10.16	Form of Indemnification Agreement between the Company and each of its directors and executive officers	10-Q	000-50633	August 5, 2008	10.1	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.17*+	Scientific Advisory Board Consulting Agreement, dated April 1, 2008, by and between the Company and James H. Sabry	8-K	000-50633	April 2, 2008	10.66	
10.18+	Amended and Restated Executive Employment Agreement, dated May 21, 2007, by and between the Company and Robert Blum	10-Q	000-50633	August 5, 2008	10.69	
10.19+	Form of Executive Employment Agreement between the Company and its executive officers	10-Q	000-50633	August 5, 2008	10.68	
10.20*	Amendment No. 1, dated June 17, 2008, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.62	
10.21*	Amendment No. 2, dated September 30, 2008, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.63	
10.22*	Amendment No. 3, dated October 31, 2008, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.65	
10.23*	Amendment No. 4, dated February 20, 2009, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 12, 2009	10.67	
10.24+	Form of Amendment No. 1 to Amended and Restated Executive Employment Agreements	10-K	000-50633	March 12, 2009	10.68	
10.25	Third Amendment to Lease, dated December 10, 2010, by and between the Company and Britannia Pointe Grand Limited Partnership	10-K	000-50633	March 11, 2011	10.65	
10.26*	Amendment No. 5, dated November 1, 2010, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 11, 2011	10.66	
10.27*	Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011	10-K	000-50633	March 13, 2012	10.42	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.28*	Amendment No. 1, dated May 1, 2012, to Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011	10-Q	000-50633	May 4, 2012	10.43	
10.29*	Amendment No. 2, dated October 30, 2012 to Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011	10-K	000-50633	March 15, 2013	10.44	
10.30+	2015 Compensation Information for the Company's Named Executive Officers	8-K	000-50633	March 2, 2015	10.1	
10.31+	Form of Option Agreement	10-K	000-50633	March 15, 2013	10.46	
10.32+	Form of Restricted Stock Unit Award Agreement	10-K	000-50633	March 15, 2013	10.47	
10.33	Common Stock Purchase Agreement dated June 11, 2013, by and between the Company and Amgen, Inc.	8-K	000-50633	June 12, 2013	10.48	
10.34*	Amendment No. 6, dated June 11, 2013, to the Collaboration and Option Agreement by and between the Company and Amgen, Inc.	10-Q	000-50633	August 7, 2013	10.46	
10.35+	Form of Executive Employment Agreement between the Company and its executive officers	10-K	000-50633	March 7, 2014	10.39	
10.36	Common Stock Purchase Agreement by and between the Company and Astellas Pharma Inc. dated December 22, 2014	8-K	000-50633	December 23, 2014	10.46	
10.37*	Amended and Restated License and Collaboration Agreement, dated December 22, 2014, by and between the Company and Astellas Pharma Inc.	10-K	000-50633	March 6, 2015	10.40	
10.38*	Amendment No. 7, dated March 19, 2015, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-Q	000-50633	May 4, 2015	10.41	
10.39	Controlled Equity Offering Sales Agreement, dated as of September 4, 2015, by and between the Company and Cantor Fitzgerald & Co.	8-K	000-50633	September 4, 2015	10.43	

Exhibit No.	Exhibits	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exh. No.	
10.40**	Loan and Security Agreement, dated as of October 19, 2015, by and among the Company, Oxford Finance LLC and Silicon Valley Bank					X
23.1	Consent of Independent registered public accounting firm					X
24.1	Power of Attorney (included in the signature page to this report)					X
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1	Certifications of the Principal Executive Officer and the Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350)(1)					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

* Portions of this Exhibit are subject to a confidential treatment order.

** Registrant has requested confidential treatment for portions of this Exhibit.

\+ Management contract or compensatory plan.

(1) This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

(b) Exhibits

The exhibits listed under Item 15(a)(3) hereof are filed as part of this Form 10-K, other than Exhibit 32.1 which shall be deemed furnished.

(c) Financial Statement Schedules

None — All financial statement schedules are omitted because the information is inapplicable or presented in the notes to the financial statements.

Exhibit 4.6

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE COMPANY, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE STOCK

Company:	CYTOKINETICS, INCORPORATED, a Delaware corporation
Number of Shares:	[3.0% of the funded Term Loan / Warrant Price]
Type/Series of Stock:	Common Stock
Warrant Price:	[the lower of (i) the average closing price of a share of common stock reported on the Trading Market (as defined below) for the 10 trading days ending on the day before the Issue Date and (ii) the closing price of a share of common stock reported on the Trading Market on the Business Day (as defined below) before the Issue Date] per share
Issue Date:	_____
Expiration Date:	_____ See also Section 5.1(b).
Credit Facility:	This Warrant to Purchase Stock ("**Warrant**") is issued in connection with that certain Loan and Security Agreement of even date herewith among Oxford Finance LLC, as Lender and Collateral Agent, the Lenders from time to time party thereto, including Silicon Valley Bank and the Company (as modified, amended and/or restated from time to time, the "**Loan Agreement**").

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, [SILICON VALLEY BANK] (/[OXFORD FINANCE LLC ("**Oxford**" and,] together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, "**Holder**") is entitled to purchase the number of fully paid and non-assessable shares (the "**Shares**") of the above-stated Type/Series of Stock (the "**Class**") of the above-named company (the "**Company**") at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant. [Reference is made to Section 5.4 of this Warrant whereby Silicon Valley Bank shall transfer this Warrant to its parent company, SVB Financial Group.]

SECTION 1. EXERCISE.

1.1 Method of Exercise. Holder may at any time and from time to time exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised. Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

$$X = Y(A-B)/A$$

where:

X = the number of Shares to be issued to the Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Shares surrendered to the Company in payment of the aggregate Warrant Price);

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If the Company's common stock is then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a "**Trading Market**") and the Class is common stock, the fair market value of a Share shall be the closing price of a share of common stock reported on the Trading Market for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company.

1.4 Delivery of Certificate and New Warrant. Within a reasonable time after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall issue and deliver to (or cause its transfer agent to issue and deliver) Holder the Shares issued to Holder upon such exercise and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, "**Acquisition**" means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license, or other disposition of all or substantially all of the assets of the Company; (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company's domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company's (or the surviving or successor entity's) outstanding voting power immediately after such merger, consolidation or reorganization (or, if such Company stockholders beneficially own a majority of the outstanding voting power of the surviving or successor entity as of immediately after such merger, consolidation or reorganization, such surviving or successor entity is not the Company); or (iii) any sale or other transfer by the stockholders of the Company of shares representing at least a majority of the Company's then-total outstanding combined voting power.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a "**Cash/Public Acquisition**"), either (i) Holder shall exercise this Warrant pursuant to Section 1.1 and/or 1.2 and such exercise will be deemed effective immediately prior to and contingent upon the consummation of such Acquisition or (ii) if Holder elects not to exercise the Warrant, this Warrant will expire immediately prior to the consummation of such Acquisition.

(c) The Company shall provide Holder with written notice of its request relating to the Cash/Public Acquisition (together with such reasonable information as Holder may reasonably require regarding the treatment of this Warrant in connection with such contemplated Cash/Public Acquisition giving rise to such notice), which is to be delivered to Holder not less than seven (7) Business Days prior to the closing of the proposed Cash/Public Acquisition. In the event the Company does not provide such notice, then if, immediately prior to the

Cash/Public Acquisition, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall promptly notify the Holder of the number of Shares (or such other securities) issued upon such exercise to the Holder and Holder shall be deemed to have restated each of the representations and warranties in Section 4 of the Warrant as the date thereof.

(d) Upon the closing of any Acquisition other than a Cash/Public Acquisition defined above, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(e) As used in this Warrant, "**Marketable Securities**" means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded or quoted on a Trading Market, and (iii) following the closing of such Acquisition, Holder would not be restricted from publicly re-selling all of the issuer's shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise or convert this Warrant in full on or prior to the closing of such Acquisition, except to the extent that any such restriction (x) arises solely under federal or state securities laws, rules or regulations, and (y) does not extend beyond six (6) months from the closing of such Acquisition.

SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in common stock or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased and the Warrant Price shall be proportionately decreased. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased and the number of Shares shall be proportionately decreased.

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations substitutions, replacements or other similar events.

2.3 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (i) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (ii) the then-effective Warrant Price.

2.4 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company's expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder, furnish Holder with a certificate of its Chief Financial Officer, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

SECTION 3. REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) All Shares which may be issued upon the exercise of this Warrant, shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class, common stock and other securities as will be sufficient to permit the exercise in full of this Warrant.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class or common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class; or

(d) effect an Acquisition or to liquidate, dissolve or wind up;

then, in connection with each such event, the Company shall give Holder:

(1) at least seven (7) Business Days prior written notice of the date on which a record will be taken for such dividend, distribution, or subscription rights (and specifying the date on which the holders of outstanding shares of the Class will be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (a) and (b) above; and

(2) in the case of the matters referred to in (c) and (d) above at least seven (7) Business Days prior written notice of the date when the same will take place (and specifying the date on which the holders of outstanding shares of the Class will be entitled to exchange their shares for the securities or other property deliverable upon the occurrence of such event).

Reference is made to Section 1.6(c) whereby this Warrant will be deemed to be exercised pursuant to Section 1.2 hereof if the Company does not give written notice to Holder of a Cash/Public Acquisition as required by the terms hereof. Company will also provide information requested by Holder that is reasonably necessary to enable Holder to comply with Holder's accounting or reporting requirements.

SECTION 4. REPRESENTATIONS, WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account. This Warrant and the securities to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.6 No Voting Rights. Holder, as a Holder of this Warrant, will not have any voting rights until the exercise of this Warrant.

SECTION 5. MISCELLANEOUS.

5.1 Term; Automatic Cashless Exercise Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, [ ] time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares (or such other securities) issued upon such exercise to Holder.

5.2 Legends. Each certificate evidencing Shares shall be imprinted with a legend in substantially the following form:

THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO [SILICON VALLEY BANK[/[OXFORD FINANCE LLC] DATED , MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issued upon exercise of this Warrant may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not require Holder to provide an opinion of counsel if the transfer is to [SVB Financial Group (Silicon Valley Bank's parent company) or any other]/[an] affiliate of Holder, provided that any such transferee is an "accredited investor" as defined in Regulation D promulgated under the Act. Additionally, the Company shall also not require an opinion of counsel if there is no material question as to the availability of Rule 144 promulgated under the Act.

5.4 Transfer and Assignment Procedure. [After receipt by Silicon Valley Bank of the executed Warrant, Silicon Valley Bank will transfer all of this Warrant to its parent company, SVB Financial Group. By its acceptance of this Warrant, SVB Financial Group hereby makes to the Company each of the representations and warranties set forth in Section 4 hereof and agrees to be bound by all of the terms and conditions of this Warrant as if the original Holder hereof. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, SVB Financial Group and any subsequent Holder may transfer all or part of this Warrant or the Shares issuable upon exercise of this Warrant to any transferee, provided, however, in connection with any such transfer, SVB Financial Group or any subsequent Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee other than SVB Financial Group shall agree in writing with the Company to be bound by all of the terms and conditions of this Warrant. Notwithstanding any contrary provision herein, Holder may not, without the Company's prior written consent, transfer this Warrant or any portion hereof, or any Shares issued upon any exercise hereof, to any person or entity who directly competes with the Company, except in connection with an Acquisition of the Company by such a direct competitor.][After receipt by Oxford of the executed Warrant, Oxford may transfer all or part of this Warrant to one or more of Oxford's affiliates (each, an "**Oxford Affiliate**"), by execution of an Assignment substantially in the form of Appendix 2. Subject to the provisions of Article 5.3 and upon providing the Company with written notice and a duly executed Assignment, Oxford, any such Oxford Affiliate and any subsequent Holder, may transfer all or part of this Warrant or the Shares issuable upon exercise of this Warrant to any other transferee, provided, however, in connection with any such transfer, the Oxford Affiliate(s) or any subsequent Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable). Notwithstanding any contrary provision herein, Holder may not, without the Company's prior written consent, transfer this Warrant or any portion hereof, or any Shares issued upon any exercise hereof, to any person or entity who directly competes with the Company, except in connection with an Acquisition of the Company by such a direct competitor.]

5.5 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

Attn:

Telephone:
Facsimile:
Email:

Notice to the Company shall be addressed as follows until Holder receives notice of a change in address:

CYTOKINETICS, INCORPORATED
280 E. Grand Avenue
South San Francisco, CA 94080
Attn: Chief Financial Officer
Telephone:
Facsimile:
Email:

With a copy (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304-1130
Attn: Michael E. Tenta
Fax: (650) 849-7400
Email:

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

5.9 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of California, without giving effect to its principles regarding conflicts of law.

5.10 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

5.11 Business Days. "**Business Day**" is any day that is not a Saturday, Sunday or a day on which banks in California are closed.

[Remainder of page left blank intentionally]

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

"COMPANY"

CYTOKINETICS, INCORPORATED

By: _____

Name: _____
(Print)

Title: _____

"HOLDER"

By: _____

Name: _____
(Print)

Title: _____

[*Signature Page to Warrant to Purchase Stock*]

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned Holder hereby exercises its right purchase _____ shares of the Common Stock of CYTOKINETICS, INCORPORATED (the "**Company**") in accordance with the attached Warrant To Purchase Stock, and tenders payment of the aggregate Warrant Price for such shares as follows:

[ ] check in the amount of $_____ payable to order of the Company enclosed herewith

[ ] Wire transfer of immediately available funds to the Company's account

[ ] Cashless Exercise pursuant to Section 1.2 of the Warrant

[ ] Other [Describe] _____

2. Please issue a certificate or certificates representing the Shares in the name specified below:

_____
Holder's Name

_____

_____
(Address)

3. By its execution below and for the benefit of the Company, Holder hereby restates each of the representations and warranties in Section 4 of the Warrant to Purchase Stock as of the date hereof.

HOLDER:

_____

By: _____

Name: _____

Title: _____

Date: _____

[APPENDIX 2

ASSIGNMENT

For value received, Oxford Finance LLC hereby sells, assigns and transfers unto

Name: [OXFORD TRANSFEREE]

Address: _____

Tax ID: _____]

that certain Warrant to Purchase Stock issued by CYTOKINETICS, INCORPORATED (the "**Company**"), on [DATE] (the "**Warrant**") together with all rights, title and interest therein.

OXFORD FINANCE LLC

By: _____
Name: _____
Title: _____

Date: _____

By its execution below, and for the benefit of the Company, [OXFORD TRANSFEREE] makes each of the representations and warranties set forth in Section 4 of the Warrant and agrees to all other provisions of the Warrant as of the date hereof.

[OXFORD TRANSFEREE]

By: _____
Name: _____
Title: _____]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

Exhibit 10.40

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (as the same may from time to time be amended, modified, supplemented or restated, this "**Agreement**") dated as of October 19, 2015 (the "**Effective Date**") among OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 ("**Oxford**"), as collateral agent (in such capacity, "**Collateral Agent**"), the Lenders listed on Schedule 1.1 hereof or otherwise a party hereto from time to time including Oxford in its capacity as a Lender and SILICON VALLEY BANK, a California corporation with an office located at 3003 Tasman Drive, Santa Clara, CA 95054 ("**Bank**" or "**SVB**") (each a "**Lender**" and collectively, the "**Lenders**"), and CYTOKINETICS, INCORPORATED, a Delaware corporation with offices located at 280 East Grand Avenue, South San Francisco, CA 94080 ("**Borrower**"), provides the terms on which the Lenders shall lend to Borrower and Borrower shall repay the Lenders. The parties agree as follows:

1. ACCOUNTING AND OTHER TERMS

1.1 Accounting terms not defined in this Agreement shall be construed in accordance with GAAP. Calculations and determinations must be made in accordance with GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. All references to "**Dollars**" or "**$**" are United States Dollars, unless otherwise noted.

2. LOANS AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay each Lender, the outstanding principal amount of all Term Loans advanced to Borrower by such Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

2.2 Term Loans.

(a) Availability. (i) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Effective Date in an aggregate amount of Fifteen Million Dollars ($15,000,000.00) according to each Lender's Term A Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term A Loan**", and collectively as the "**Term A Loans**"). After repayment, no Term A Loan may be re-borrowed.

(ii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Second Draw Period, to make term loans to Borrower in an aggregate amount up to Fifteen Million Dollars ($15,000,000.00) according to each Lender's Term B Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term B Loan**", and collectively as the "**Term B Loans**"). After repayment, no Term B Loan may be re-borrowed.

(iii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Third Draw Period, to make term loans to Borrower in an aggregate amount up to Ten Million Dollars ($10,000,000.00) according to each Lender's Term C Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term C Loan**", and collectively as the "**Term C Loans**"; each Term A Loan, Term B Loan or Term C Loan is hereinafter referred to singly as a "**Term Loan**" and the Term A Loans, the Term B Loans and the Term C Loans are hereinafter referred to collectively as the "**Term Loans**"). After repayment, no Term C Loan may be re-borrowed.

(b) Repayment. Borrower shall make monthly payments of interest only commencing on the first (1st) Payment Date following the Funding Date of each Term Loan, and continuing on the Payment Date of each successive month thereafter through and including the Payment Date immediately preceding the Amortization Date. Borrower agrees to pay, on the Funding Date of each Term Loan, any initial partial monthly interest payment otherwise due for the period between the Funding Date of such Term Loan and the first Payment Date thereof. Commencing on the Amortization Date, and continuing on the Payment Date of each month thereafter, Borrower shall make equal monthly payments of principal, together with applicable interest, in arrears, to each Lender, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of such Lender's Term Loan, (2) the effective rate of interest, as determined in Section 2.3(a), and (3) a repayment schedule equal to thirty-six (36) months. All unpaid principal and accrued and unpaid interest with respect to each Term Loan is due and payable in full on the Maturity Date. Each Term Loan may only be prepaid in accordance with Sections 2.2(c) and 2.2(d).

(c) Mandatory Prepayments. If the Term Loans are accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Lenders, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of: (i) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (ii) the Final Payment, (iii) the Prepayment Fee, plus (iv) all other Obligations that are due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts. Notwithstanding (but without duplication with) the foregoing, on the Maturity Date, if the Final Payment had not previously been paid in full in connection with the prepayment of the Term Loans in full, Borrower shall pay to Collateral Agent, for payment to each Lender in accordance with its respective Pro Rata Share, the Final Payment in respect of the Term Loan(s).

(d) Permitted Prepayment of Term Loans.

(i) Borrower shall have the option to prepay all, but not less than all, of the Term Loans advanced by the Lenders under this Agreement, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loans at least ten (10) days prior to such prepayment, and (ii) pays to the Lenders on the date of such prepayment, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of (A) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (B) the Final Payment, (C) the Prepayment Fee, plus (D) all other Obligations that are due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts.

(ii) Notwithstanding anything herein to the contrary, Borrower shall also have the option to prepay part of Term Loans advanced by the Lenders under this Agreement, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loans at least ten (10) days prior to such prepayment, (ii) prepays such part of the Term Loans in a denomination that is a whole number multiple of Four Million Dollars ($4,000,000.00), and (iii) pays to the Lenders on the date of such prepayment, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of (A) the portion of outstanding principal of such Term Loans plus all accrued and unpaid interest thereon through the prepayment date, (B) the applicable Final Payment, and (C) all other Obligations that are then due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts, and (D) the applicable Prepayment Fee with respect to the portion of such Term Loans being prepaid. For the purposes of clarity, any partial prepayment shall be applied pro-rata to all outstanding amounts under each Term Loan, and shall be applied pro-rata within each Term Loan tranche to reduce amortization payments under Section 2.2(b) on a pro-rata basis.

2.3 Payment of Interest on the Credit Extensions.

(a) Interest Rate. Subject to Section 2.3(b), the principal amount outstanding under the Term Loans shall accrue interest at a floating per annum rate (which rate shall be floating for the duration of the applicable Term Loan) equal to the Basic Rate, determined by Collateral Agent on the Funding Date of the applicable Term Loan, which interest shall be payable monthly in arrears in accordance with Sections 2.2(b) and 2.3(e). Interest shall accrue on each Term Loan commencing on, and including, the Funding Date of such Term Loan, and shall accrue on the principal amount outstanding under such Term Loan through and including the day on which such Term Loan is paid in full.

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(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall accrue interest at a floating per annum rate equal to the rate that is otherwise applicable thereto plus [*] (the "**Default Rate**"). Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Collateral Agent.

(c) 360-Day Year. Interest shall be computed on the basis of a three hundred sixty (360) day year, and the actual number of days elapsed.

(d) Debit of Accounts. Collateral Agent and each Lender may debit (or ACH) any deposit accounts, maintained by Borrower or any Loan Party, including the Designated Deposit Account, for principal and interest payments or any other amounts Borrower owes the Lenders under the Loan Documents when due. Any such debits (or ACH activity) shall not constitute a set-off.

(e) Payments. Except as otherwise expressly provided herein, all payments by Borrower under the Loan Documents shall be made to the respective Lender to which such payments are owed, at such Lender's office in immediately available funds on the date specified herein. Unless otherwise provided, interest is payable monthly on the Payment Date of each month. Payments of principal and/or interest received after 12:00 noon Eastern time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue until paid. All payments to be made by Borrower hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set-off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds.

2.4 Secured Promissory Notes. The Term Loans shall be evidenced by a Secured Promissory Note or Notes in the form attached as Exhibit D hereto (each a "**Secured Promissory Note**"), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes each Lender to make or cause to be made, on or about the Funding Date of any Term Loan or at the time of receipt of any payment of principal on such Lender's Secured Promissory Note, an appropriate notation on such Lender's Secured Promissory Note Record reflecting the making of such Term Loan or (as the case may be) the receipt of such payment. The outstanding amount of each Term Loan set forth on such Lender's Secured Promissory Note Record shall be prima facie evidence of the principal amount thereof owing and unpaid to such Lender, but the failure to record, or any error in so recording, any such amount on such Lender's Secured Promissory Note Record shall not limit or otherwise affect the obligations of Borrower under any Secured Promissory Note or any other Loan Document to make payments of principal of or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of a Lender as to the loss, theft, destruction, or mutilation of its Secured Promissory Note, Borrower shall issue, in lieu thereof, a replacement Secured Promissory Note in the same principal amount thereof and of like tenor.

2.5 Fees. Borrower shall pay to Collateral Agent:

(a) Facility Fee. [waived];

(b) Final Payment. The Final Payment, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares;

(c) Prepayment Fee. The Prepayment Fee, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares; and

(d) Lenders' Expenses. All Lenders' Expenses (including reasonable attorneys' fees and expenses for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

2.6 Withholding. Payments received by the Lenders from Borrower hereunder will be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, duties, deductions,

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withholdings, assessments, fees or other charges imposed by any governmental authority (including any interest, additions to tax or penalties applicable thereto). Specifically, however, if at any time any Governmental Authority, applicable law, regulation or international agreement requires Borrower to make any withholding or deduction from any such payment or other sum payable hereunder to the Lenders, Borrower hereby covenants and agrees that the amount due from Borrower with respect to such payment or other sum payable hereunder [*] such required withholding or deduction, [*] and Borrower shall pay the full amount withheld or deducted to the relevant Governmental Authority. Borrower will, upon request, furnish the Lenders with proof reasonably satisfactory to the Lenders indicating that Borrower has made such withholding payment; provided, however, that Borrower need not make any withholding payment if the amount or validity of such withholding payment is contested in good faith by appropriate and timely proceedings [*]. The agreements and obligations of Borrower contained in this Section 2.6 shall survive the termination of this Agreement.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Credit Extension. Each Lender's obligation to make a Term A Loan is subject to the condition precedent that Collateral Agent and each Lender shall consent to or shall have received, in form and substance satisfactory to Collateral Agent and each Lender, such documents, and completion of such other matters, as Collateral Agent and each Lender may reasonably deem necessary or appropriate, including, without limitation:

(a) original Loan Documents, each duly executed by Borrower and each Subsidiary, as applicable, that is a Loan Party;

(b) duly executed original Control Agreements with respect to any Collateral Accounts maintained by Borrower or any of its Subsidiaries that are Loan Parties;

(c) duly executed original Secured Promissory Notes in favor of each Lender according to its Term A Loan Commitment Percentage;

(d) the Operating Documents and good standing certificates of Borrower and its Subsidiaries that are Loan Parties certified by the Secretary of State (or equivalent agency) of Borrower's and such Subsidiaries' jurisdiction of organization or formation and each jurisdiction in which Borrower and each Subsidiary is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;

(e) a completed Perfection Certificate for Borrower and each of its Subsidiaries;

(f) the Annual Projections, for the current calendar year;

(g) duly executed original officer's certificate for Borrower and each Subsidiary that is a party to the Loan Documents, in a form acceptable to Collateral Agent and the Lenders;

(h) certified copies, dated as of date no earlier than thirty (30) days prior to the Effective Date, of financing statement searches, as Collateral Agent shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;

(i) a landlord's consent executed in favor of Collateral Agent in respect of all of Borrower's and each Loan Party's headquarter locations and each additional location, other than contract manufacturers and clinical sites which hold non-commercial inventory with assets having a book value of less than [*];

(j) a duly executed legal opinion of counsel to Borrower dated as of the Effective Date;

(k) evidence satisfactory to Collateral Agent and the Lenders that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Collateral Agent, for the ratable benefit of the Lenders; and

(l) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

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3.2 Conditions Precedent to all Credit Extensions. The obligation of each Lender to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

(a) receipt by (i) the Lenders of an executed Disbursement Letter in the form of Exhibit B-1 attached hereto; and (ii) SVB of an executed Loan Payment/Advance Request Form in the form of Exhibit B-2 attached hereto;

(b) the representations and warranties in Section 5 hereof shall be true, accurate and complete in all material respects on the date of the Disbursement Letter (and the Loan Payment/Advance Request Form) and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in Section 5 hereof are true, accurate and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date;

(c) in such Lender's sole discretion, there has not been any Material Adverse Change or any material adverse deviation by Borrower from the Annual Projections of Borrower presented to and accepted by Collateral Agent and each Lender;

(d) to the extent not delivered at the Effective Date, duly executed original Secured Promissory Notes and Warrants, in number, form and content acceptable to each Lender, and in favor of each Lender according to its Commitment Percentage, with respect to each Credit Extension made by such Lender after the Effective Date; and

(e) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

3.3 Covenant to Deliver. Borrower agrees to deliver to Collateral Agent and the Lenders each item required to be delivered to Collateral Agent under this Agreement as a condition precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Collateral Agent or any Lender of any such item shall not constitute a waiver by Collateral Agent or any Lender of Borrower's obligation to deliver such item, and any such Credit Extension in the absence of a required item shall be made in each Lender's sole discretion.

3.4 Procedures for Borrowing. Subject to the prior satisfaction of all other applicable conditions to the making of a Term Loan set forth in this Agreement, to obtain a Term Loan, Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 noon Eastern time three (3) Business Days prior to the date the Term Loan is to be made. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to the Lenders by electronic mail or facsimile a completed Disbursement Letter (and the Loan Payment/Advance Request Form, with respect to SVB) executed by a Responsible Officer or his or her designee. The Lenders may rely on any telephone notice given by a person whom a Lender reasonably believes is a Responsible Officer or designee. On the Funding Date, each Lender shall credit and/or transfer (as applicable) to the Designated Deposit Account, an amount equal to its Term Loan Commitment.

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4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Collateral Agent, for the ratable benefit of the Lenders, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Collateral Agent, for the ratable benefit of the Lenders, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral, subject only to Permitted Liens that are permitted by the terms of this Agreement to have priority to Collateral Agent's Lien. If Borrower shall acquire a commercial tort claim (as defined in the Code), Borrower, shall promptly notify Collateral Agent in a writing signed by Borrower, as the case may be, of the general details thereof (and further details as may be required by Collateral Agent) and grant to Collateral Agent, for the ratable benefit of the Lenders, in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Collateral Agent.

Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Permitted Liens that may have superior priority to Bank's Lien in this Agreement).

If this Agreement is terminated, Collateral Agent's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as the Lenders' obligation to make Credit Extensions has terminated, Collateral Agent shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower. In the event (x) all Obligations (other than inchoate indemnity obligations), except for Bank Services, are satisfied in full, and (y) this Agreement is terminated, Bank shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its good faith business judgment for Bank Services, if any. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then [*]; and (y) if such Letters of Credit are denominated in a Foreign Currency, then [*], of the Dollar Equivalent of the face amount of all such Letters of Credit plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment), to secure all of the Obligations relating to such Letters of Credit.

4.2 Authorization to File Financing Statements. Borrower hereby authorizes Collateral Agent to file financing statements or take any other action required to perfect Collateral Agent's security interests in the Collateral, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Collateral Agent's interest or rights under the Loan Documents, including a notice that any disposition of the Collateral, except to the extent permitted by the terms of this Agreement, by Borrower, or any other Person, shall be deemed to violate the rights of Collateral Agent under the Code.

4.3 Pledge of Collateral. Borrower hereby pledges, assigns and grants to Collateral Agent, for the ratable benefit of the Lenders, a security interest in all the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. On the Effective Date, or, to the extent not certificated as of the Effective Date, within ten (10) days of the certification of any Shares, the certificate or certificates for the Shares will be delivered to Collateral Agent, accompanied by an instrument of assignment duly executed in blank by Borrower. To the extent required by the terms and conditions governing the Shares, Borrower shall cause the books of each entity whose Shares are part of the Collateral and any transfer agent to reflect the pledge of the Shares. Upon the occurrence and during the continuance of an Event of Default hereunder, Collateral Agent may effect the transfer of any securities included in the Collateral (including but not limited to the Shares) into the name of Collateral Agent and cause new (as applicable) certificates representing such securities to be issued in the name of Collateral Agent or its transferee. Borrower will execute and deliver such documents, and take or cause to be taken such actions, as Collateral Agent may reasonably request to perfect or continue the perfection of Collateral Agent's security interest in the Shares. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to

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exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon the occurrence and continuance of an Event of Default.

5. REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants to Collateral Agent and the Lenders as follows:

5.1 Due Organization, Authorization: Power and Authority. Borrower and each of its Subsidiaries is duly existing and in good standing as a Registered Organization in its jurisdictions of organization or formation and Borrower and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its businesses or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Change. In connection with this Agreement, Borrower and each of its Subsidiaries has delivered to Collateral Agent a completed perfection certificate signed by an officer of Borrower or such Subsidiary (each a "**Perfection Certificate**" and collectively, the "**Perfection Certificates**"). Borrower represents and warrants that (a) Borrower and each of its Subsidiaries' exact legal name is that which is indicated on its respective Perfection Certificate and on the signature page of each Loan Document to which it is a party; (b) Borrower and each of its Subsidiaries is an organization of the type and is organized in the jurisdiction set forth on its respective Perfection Certificate; (c) each Perfection Certificate accurately sets forth each of Borrower's and its Subsidiaries' organizational identification number or accurately states that Borrower or such Subsidiary has none; (d) each Perfection Certificate accurately sets forth Borrower's and each of its Subsidiaries' place of business, or, if more than one, its chief executive office as well as Borrower's and each of its Subsidiaries' mailing address (if different than its chief executive office); (e) Borrower and each of its Subsidiaries (and each of its respective predecessors) have not, in the past five (5) years, changed its jurisdiction of organization, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificates pertaining to Borrower and each of its Subsidiaries, is accurate and complete (it being understood and agreed that Borrower and each of its Subsidiaries may from time to time update certain information in the Perfection Certificates (including the information set forth in clause (d) above) after the Effective Date to the extent permitted by one or more specific provisions in this Agreement); such updated Perfection Certificates subject to the review and approval of Collateral Agent. If Borrower or any of its Subsidiaries is not now a Registered Organization but later becomes one, Borrower shall notify Collateral Agent of such occurrence and provide Collateral Agent with such Person's organizational identification number within five (5) Business Days of receiving such organizational identification number.

The execution, delivery and performance by Borrower and each of its Subsidiaries of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's or such Subsidiaries' organizational documents, including its respective Operating Documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law applicable thereto, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or such Subsidiary, or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect) or are being obtained pursuant to Section 6.1(b), or (v) constitute an event of default under any material agreement by which Borrower or any of such Subsidiaries, or their respective properties, is bound. Neither Borrower nor any of its Subsidiaries is in default under any agreement to which it is a party or by which it or any of its assets is bound in which such default could reasonably be expected to have a Material Adverse Change.

5.2 Collateral.

(a) Borrower and each its Subsidiaries have good title to, have rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens, and neither Borrower nor any of its Subsidiaries have any Deposit Accounts, Securities Accounts, Commodity Accounts or other investment accounts other than the Collateral

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Accounts or the other investment accounts, if any, described in the Perfection Certificates delivered to Collateral Agent in connection herewith with respect of which Borrower or such Subsidiary has given Collateral Agent notice and taken such actions as are necessary to give Collateral Agent a perfected security interest therein. The Accounts are bona fide, existing obligations of the Account Debtors.

(b) On the Effective Date, and except as disclosed on the Perfection Certificate and except with respect to Collateral at clinical sites and with contract manufacturers which hold non-commercial inventory (i) the Collateral is not in the possession of any third party bailee (such as a warehouse), and (ii) no such third party bailee possesses components of the Collateral in excess of [*]. None of the components of the Collateral shall be maintained at locations other than as disclosed in the Perfection Certificates on the Effective Date, with contract manufacturers or at clinical sites which hold non-commercial inventory, or as permitted pursuant to Section 6.11.

(c) All Inventory is in all material respects of good and marketable quality, free from material defects.

(d) Borrower and each of its Subsidiaries is the sole owner of the Intellectual Property each respectively purports to own, free and clear of all Liens other than Permitted Liens. Except as noted on the Perfection Certificates, neither Borrower nor any of its Subsidiaries is a party to, nor is bound by, any material license or other material agreement with respect to which Borrower or such Subsidiary is the licensee that (i) prohibits or otherwise restricts Borrower or its Subsidiaries from granting a security interest in Borrower's or such Subsidiaries' interest in such material license or material agreement or any other property, or (ii) for which a default under or termination of could interfere with Collateral Agent's or any Lender's right to sell any Collateral. Borrower shall provide written notice to Collateral Agent and each Lender within ten (10) days of Borrower or any of its Subsidiaries entering into or becoming bound by any license or agreement with respect to which Borrower or any Subsidiary is the licensee (other than over-the-counter software that is commercially available to the public).

5.3 Litigation. Except as disclosed (i) on the Perfection Certificates, or (ii) in accordance with Section 6.9 hereof, there are no actions, suits, investigations, or proceedings pending or, to the knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than [*].

5.4 No Material Deterioration in Financial Condition; Financial Statements. All consolidated financial statements for Borrower and its Subsidiaries, delivered to Collateral Agent fairly present, in conformity with GAAP, in all material respects the consolidated financial condition of Borrower and its Subsidiaries, and the consolidated results of operations of Borrower and its Subsidiaries. There has not been any material deterioration in the consolidated financial condition of Borrower and its Subsidiaries since the date of the most recent financial statements submitted to any Lender.

5.5 Solvency. Borrower and each of its Subsidiaries is Solvent.

5.6 Regulatory Compliance. Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower nor any of its Subsidiaries has violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a Material Adverse Change. Neither Borrower's nor any of its Subsidiaries' properties or assets has been used by Borrower or such Subsidiary or, to Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted.

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None of Borrower, any of its Subsidiaries, or any of Borrower's or its Subsidiaries' Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the knowledge of Borrower and any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law.

5.7 Investments. Neither Borrower nor any of its Subsidiaries owns any stock, shares, partnership interests or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower and each of its Subsidiaries has timely filed all required tax returns and reports or extensions thereof, and Borrower and each of its Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower and such Subsidiaries, in all jurisdictions in which Borrower or any such Subsidiary is subject to taxes, including the United States, unless such taxes are being contested in accordance with the following sentence. Borrower and each of its Subsidiaries, may defer payment of any contested taxes, provided that Borrower or such Subsidiary, (a) in good faith contests its obligation to pay the taxes by appropriate proceedings promptly and diligently instituted and conducted, (b) notifies Collateral Agent in writing of the commencement of, and any material development in, the proceedings, and (c) posts bonds or takes any other steps required to prevent the Governmental Authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "**Permitted Lien.**" Neither Borrower nor any of its Subsidiaries is aware of any claims or adjustments proposed for any of Borrower's or such Subsidiaries', prior tax years which could result in additional taxes becoming due and payable by Borrower or its Subsidiaries. Borrower and each of its Subsidiaries have paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and neither Borrower nor any of its Subsidiaries have, withdrawn from participation in, and have not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower or its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

5.9 Use of Proceeds. Borrower shall use the proceeds of the Credit Extensions solely as working capital and to fund its general business requirements in accordance with the provisions of this Agreement, and not for personal, family, household or agricultural purposes.

5.10 Shares. Borrower has full power and authority to create a first lien on the Shares and no disability or contractual obligation exists that would prohibit Borrower from pledging the Shares pursuant to this Agreement. To Borrower's knowledge, there are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will be duly authorized and validly issued, and are fully paid and non-assessable. To Borrower's knowledge, the Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and Borrower knows of no reasonable grounds for the institution of any such proceedings.

5.11 Full Disclosure. No written representation, warranty or other statement of Borrower or any of its Subsidiaries in any certificate or written statement given to Collateral Agent or any Lender, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Collateral Agent or any Lender, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading (it being recognized that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

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5.12 Definition of "Knowledge." For purposes of the Loan Documents, whenever a representation or warranty is made to Borrower's knowledge or awareness, to the "**best of**" Borrower's knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of the Responsible Officers.

6. AFFIRMATIVE COVENANTS

Borrower shall, and shall cause each of its Subsidiaries to, do all of the following:

6.1 Government Compliance.

(a) Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Change. Comply with all laws, ordinances and regulations to which Borrower or any of its Subsidiaries is subject, the noncompliance with which could reasonably be expected to have a Material Adverse Change.

(b) Obtain and keep in full force and effect, all of the material Governmental Approvals necessary for the performance by Borrower and its Subsidiaries of their respective businesses and obligations under the Loan Documents and the grant of a security interest to Collateral Agent for the ratable benefit of the Lenders, in all of the Collateral. Borrower shall promptly provide copies to Collateral Agent of any material Governmental Approvals obtained by Borrower or any of its Subsidiaries.

6.2 Financial Statements, Reports, Certificates.

(a) Deliver to each Lender:

(i) as soon as available, but no later than forty-five (45) days after the last day of each fiscal quarter, a company prepared consolidated balance sheet, income statement and cash flow statement covering the consolidated operations of Borrower and its Subsidiaries for such quarter certified by a Responsible Officer and in a form reasonably acceptable to Collateral Agent;

(ii) as soon as available, but no later than ninety-five (95) days after the last day of Borrower's fiscal year or within five (5) days of filing with the SEC, audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion on the financial statements from PriceWaterhouseCoopers or another independent certified public accounting firm reasonably acceptable to Collateral Agent in its reasonable discretion;

(iii) as soon as available after approval thereof by Borrower's Board of Directors, but no later than sixty (60) days after the last day of each of Borrower's fiscal years, Borrower's annual financial projections for the entire current fiscal year as approved by Borrower's Board of Directors, which such annual financial projections shall be set forth in a quarter by quarter format (such annual financial projections as originally delivered to Collateral Agent and the Lenders are referred to herein as the "Annual Projections"; provided that, any revisions of the Annual Projections approved by Borrower's Board of Directors shall be delivered to Collateral Agent and the Lenders no later than seven (7) days after such approval);

(iv) within five (5) days of delivery, copies of all statements, reports and notices made available to Borrower's security holders or holders of Subordinated Debt;

(v) within five (5) days of filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission,

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(vi) prompt notice of any amendments of or other changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries, together with any copies reflecting such amendments or changes with respect thereto;

(vii) prompt notice of any event that could reasonably be expected to materially and adversely affect the value of the Intellectual Property;

(viii) as soon as available, but no later than thirty (30) days after the last day of each month, (i) copies of the month-end account statements for each Collateral Account maintained by Borrower or its Subsidiaries, which statements may be provided to Collateral Agent and each Lender by Borrower or directly from the applicable institution(s); and (ii) a monthly cash certificate, in the form attached hereto as Annex I; and

(ix) other information as reasonably requested by Collateral Agent or any Lender.

Notwithstanding the foregoing, documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the internet at Borrower's website address.

(b) Concurrently with the delivery of the financial statements specified in Section 6.2(a)(i) above but no later than forty-five (45) days after the last day of each quarter, deliver to each Lender, a duly completed Compliance Certificate signed by a Responsible Officer.

(c) Keep proper books of record and account in accordance with GAAP in all material respects, in which full, true and correct entries shall be made of all dealings and transactions in relation to its business and activities. Borrower shall, and shall cause each of its Subsidiaries to, allow, at the sole cost of Borrower, Collateral Agent or any Lender, during regular business hours upon reasonable prior written notice (provided that no notice shall be required when an Event of Default has occurred and is continuing), to visit and inspect any of its properties, to examine and make abstracts or copies from any of its books and records, and to conduct a collateral audit and analysis of its operations and the Collateral. Such audits shall be conducted no more often than twice every year unless (and more frequently if) an Event of Default has occurred and is continuing.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects. Returns and allowances between Borrower, or any of its Subsidiaries, and their respective Account Debtors shall follow Borrower's, or such Subsidiary's, customary practices as they exist at the Effective Date. Borrower must promptly notify Collateral Agent and the Lenders of all returns, recoveries, disputes and claims that involve more than [*] individually or in the aggregate in any calendar year.

6.4 Taxes; Pensions. Timely file and require each of its Subsidiaries to timely file, all required tax returns and reports or extensions thereof and timely pay, and require each of its Subsidiaries to timely file, all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower or its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.8 hereof, and shall deliver to Lenders, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with the terms of such plans.

6.5 Insurance. Keep Borrower's and its Subsidiaries' business and the Collateral insured for risks and in amounts standard for companies in Borrower's and its Subsidiaries' industry and location and as Collateral Agent may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Collateral Agent and Lenders. All property policies shall have a lender's loss payable endorsement showing Collateral Agent as lender loss payee and waive subrogation against Collateral Agent, and all liability policies shall show, or have endorsements showing, Collateral Agent, as additional insured. The Collateral Agent shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral, and each provider of any such insurance shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Collateral Agent, that it will give the Collateral Agent thirty (30) days prior written notice before any such policy or policies shall be materially altered or

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canceled. At Collateral Agent's request, Borrower shall deliver certified copies of policies and evidence of all premium payments. Proceeds payable under any policy shall, at Collateral Agent's option, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to [*] with respect to any loss, but not exceeding [*], in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Collateral Agent has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Collateral Agent, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. If Borrower or any of its Subsidiaries fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons, Collateral Agent and/or any Lender may make, at Borrower's expense, all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Collateral Agent or such Lender deems prudent.

6.6 Operating Accounts.

(a) Maintain (i) all of Borrower's and each Loan Party's primary operating Deposit Accounts, Letters of Credit and foreign exchange with Bank or its Affiliates in accounts which are subject to a Control Agreement in favor of Collateral Agent; and (ii) at least [*] of Borrower's and its Affiliates' investment balances with Bank or its Affiliates in accounts which are subject to a Control Agreement in favor of Collateral Agent. Notwithstanding the foregoing, no Foreign Subsidiary which is a Loan Party shall be required to deliver to Collateral Agent a Control Agreement to the extent perfection via a Control Agreement is not recognized under local laws, as reasonably determined by Collateral Agent. Notwithstanding anything herein to the contrary, Borrower shall have ninety (90) days from the Closing date to transfer [*] of its investment balances to Bank or its Affiliates, during which interim period, such amount in accounts outside of Bank or its Affiliates shall be subject to a Control Agreement in favor of Collateral Agent. Furthermore, notwithstanding anything herein to the contrary, Borrower shall only be required to maintain [*] of its investment balances at Bank or its Affiliates so long as SVB Asset Management ("SAM"), upon Borrower's prior written request, provides Borrower an annual Statement on Standards for Attestation Engagements ("SSAE16") Report providing a detailed description of SAM's internal controls. If SAM does not receive an unqualified opinion from an auditor with respect to any SSAE16 audit that SAM obtains in the ordinary course of business, after SAM has been provided a reasonable opportunity to cure any deficiency noted in any qualified opinion, Borrower will have the right, after consultation with Bank, to withdraw its investment and/or operating account funds and transfer such funds to another institution that has received an unqualified opinion from an auditor with respect to a SSAE16 audit, provided that (a) Borrower provides Collateral Agent and Lenders a copy of such SSAE 16 reports of any such other institutions, and (b) any such other institution executes and delivers a Control Agreement in favor of, and in form and content reasonably acceptable to, Collateral Agent, with respect to each such account.

(b) Borrower shall provide Collateral Agent five (5) days' prior written notice before Borrower or any Loan Party establishes any Collateral Account at or with any Person other than Bank or its Affiliates or as otherwise disclosed in the Perfection Certificates. In addition, for each Collateral Account that Borrower or any Loan Party, at any time maintains, Borrower or such Loan Party shall cause the applicable bank or financial institution at or with which such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Agent's Lien in such Collateral Account in accordance with the terms hereunder, and to the extent such perfection via a Control Agreement is recognized under local laws, prior to the establishment of such Collateral Account, which Control Agreement may not be terminated without prior written consent of Collateral Agent. The provisions of the previous sentence shall not apply to deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's, or any of its Subsidiaries', employees and identified to Collateral Agent by Borrower as such in the Perfection Certificates.

(c) Neither Borrower nor any of its Subsidiaries shall maintain any Collateral Accounts except Collateral Accounts maintained in accordance with Sections 6.6(a) and (b).

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6.7 Protection of Intellectual Property Rights. Borrower and each of its Subsidiaries shall: (a) use commercially reasonable efforts to protect, defend and maintain the validity and enforceability of its Intellectual Property that is material to Borrower's business; (b) promptly advise Collateral Agent in writing of material infringement by a third party of its Intellectual Property; and (c) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Collateral Agent's prior written consent.

6.8 Litigation Cooperation. Commencing on the Effective Date and continuing through the termination of this Agreement, make available to Collateral Agent and the Lenders, without expense to Collateral Agent or the Lenders, Borrower and each of Borrower's officers, employees and agents and Borrower's Books, to the extent that Collateral Agent or any Lender may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding instituted by or against Collateral Agent or any Lender with respect to any Collateral or relating to Borrower.

6.9 Notices of Litigation and Default. Borrower will give prompt written notice to Collateral Agent and the Lenders of any litigation or governmental proceedings pending or threatened (in writing) against Borrower or any of its Subsidiaries, which could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of [*] or more or which could reasonably be expected to have a Material Adverse Change. Without limiting or contradicting any other more specific provision of this Agreement, promptly (and in any event within three (3) Business Days) upon Borrower becoming aware of the existence of any Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, Borrower shall give written notice to Collateral Agent and the Lenders of such occurrence, which such notice shall include a reasonably detailed description of such Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default.

6.10 [Intentionally Omitted.]

6.11 Landlord Waivers; Bailee Waivers. In the event that Borrower or any of its Subsidiaries that are Loan Parties, after the Effective Date, intends to add any new offices or business locations, including warehouses, or otherwise store any portion of the Collateral having an aggregate book value in excess of [*] (other than with contract manufacturers or at clinical sites which hold non-commercial inventory), or deliver any portion of the Collateral to, a bailee, in each case pursuant to Section 7.2, then Borrower or such Subsidiary will first receive the written consent of Collateral Agent and, in the event that the new location is the chief executive office of the Borrower or such Subsidiary that is a Loan Party or the Collateral at any such new location is valued in excess of [*] in the aggregate, such bailee or landlord, as applicable, must execute and deliver a bailee waiver or landlord waiver, as applicable, in form and substance reasonably satisfactory to Collateral Agent prior to the addition of any new offices or business locations, or any such storage with or delivery to any such bailee, as the case may be.

6.12 Creation/Acquisition of Subsidiaries. In the event Borrower, or any of its Subsidiaries creates or acquires any Subsidiary, Borrower shall provide prior written notice to Collateral Agent and each Lender of the creation or acquisition of such new Subsidiary and take all such action as may be reasonably required by Collateral Agent or any Lender to cause each such Subsidiary to become a co-Borrower hereunder or to guarantee the Obligations of Borrower under the Loan Documents and, in each case, grant a continuing pledge and security interest in and to the assets of such Subsidiary (substantially as described on Exhibit A hereto); and Borrower (or its Subsidiary, as applicable) shall grant and pledge to Collateral Agent, for the ratable benefit of the Lenders, a perfected security interest in the Shares; provided, however, that solely in the circumstance in which Borrower or any Subsidiary creates or acquires a Foreign Subsidiary in an acquisition permitted by Section 7.7 hereof or otherwise approved by the Required Lenders, (i) such Foreign Subsidiary shall not be required to guarantee the Obligations of Borrower under the Loan Documents and grant a continuing pledge and security interest in and to the assets of such Foreign Subsidiary, and (ii) Borrower shall not be required to grant and pledge to Collateral Agent, for the ratable benefit of Lenders, a perfected security interest in more than sixty five percent (65%) of the Shares of such Foreign Subsidiary, if Borrower demonstrates to the reasonable satisfaction of Collateral Agent that such Foreign Subsidiary providing such guarantee or pledge and security interest or Borrower providing a perfected security interest in more than sixty five percent (65%) of the Shares would create a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code.

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6.13 Further Assurances.

(a) Execute any further instruments and take further action as Collateral Agent or any Lender reasonably requests to perfect or continue Collateral Agent's Lien in the Collateral or to effect the purposes of this Agreement.

(b) Deliver to Collateral Agent and Lenders, within five (5) days after the same are sent or received, copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to Borrower's business or otherwise could reasonably be expected to have a Material Adverse Change.

7. NEGATIVE COVENANTS

Borrower shall not, and shall not permit any of its Subsidiaries to, do any of the following without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn out, obsolete or surplus Equipment; (c) in connection with Permitted Liens, Permitted Investments and Permitted Licenses; (d) from any Subsidiary of Borrower to Borrower or between Loan Parties; (e) consisting of payments of taxes; (f) of cash and Cash Equivalents (i) in connection with transactions not prohibited hereunder, in the ordinary course of business and (ii) in connection with transactions that (A) are approved by Borrower's board of directors (to the extent Board approval is required by Borrower's policies or other organizational documents), (B) are customary for the Borrower's industry and (C) not otherwise prohibited hereunder; and (g) other Transfers of property having a book value not exceeding [*] in the aggregate during any fiscal year.

7.2 Changes in Business, Management, Ownership, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses engaged in by Borrower as of the Effective Date or reasonably related or incidental thereto; (b) liquidate or dissolve; or (c) (i) any Key Person shall cease to be actively engaged in the management of Borrower unless written notice thereof is provided to Collateral Agent within five (5) Business Days of such change, or (ii) enter into any transaction or series of related transactions in which the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty nine percent (49%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower's equity securities in a public offering, a private placement of public equity or to venture capital investors so long as Borrower identifies to Collateral Agent the venture capital investors prior to the closing of the transaction) (such transaction or series of transactions, a "Change in Control"). Borrower shall not, without at least thirty (30) days' prior written notice to Collateral Agent: (A) add any new offices or business locations, including warehouses (unless such new offices or business locations (i) contain less than [*], (ii) contain non-commercial inventory with contract manufacturers or at clinical sites or (iii) are not Borrower's or its Subsidiaries' chief executive office); (B) change its jurisdiction of organization, (C) change its organizational structure or type, (D) change its legal name, or (E) change any organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock, shares or property of another Person, except where (a) (i) total cash consideration, for all such transactions, does not in the aggregate exceed [*] in any fiscal year of Borrower; and (ii) total consideration, for all such transactions, does not in the aggregate exceed [*] in any fiscal year of Borrower; (b) such transactions are accretive to Borrower; (c) such transactions do not result in a Change in Control; (d) no Event of Default has occurred and is continuing or would exist after giving effect to the transactions; (e) Borrower is the surviving legal entity; and (f) immediately after giving effect to such transactions, Borrower has sufficient cash on hand to satisfy Borrower's projected expenses, including but not limited to debt service, for at least the succeeding twelve (12) months. A Subsidiary may merge or consolidate into another Subsidiary (provided such surviving Subsidiary is a "co Borrower" hereunder or has provided a secured Guaranty of Borrower's Obligations hereunder) or with (or into)

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Borrower provided Borrower is the surviving legal entity, and as long as no Event of Default is occurring prior thereto or arises as a result therefrom. Without limiting the foregoing, Borrower shall not, without Collateral Agent's prior written consent, enter into any binding contractual arrangement with any Person to attempt to facilitate a merger or acquisition of Borrower, unless (i) no Event of Default exists when such agreement is entered into by Borrower, (ii) such agreement does not give such Person the right to claim any break-up or similar fees, payments or damages from Borrower or any of its Subsidiaries in excess of [*] in the aggregate as a result of any failure to proceed with or close such merger or acquisition, except to the extent any such break-up or similar fees, payments or damages are to be funded solely from cash proceeds received by Borrower from a third party and (iii) Borrower notifies Collateral Agent in advance of entering into such an agreement.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, or permit any Collateral not to be subject to the first priority security interest granted herein (except for Permitted Liens that are permitted by the terms of this Agreement to have priority over Collateral Agent's Lien), or enter into any agreement, document, instrument or other arrangement (except with or in favor of Collateral Agent, for the ratable benefit of the Lenders) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower, or any of its Subsidiaries, from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or such Subsidiary's Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of "**Permitted Liens**" herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6 hereof.

7.7 Distributions; Investments. (a) Pay any dividends (other than dividends payable solely in capital stock) or make any distribution or payment in respect of or redeem, retire or purchase any capital stock except that Borrower or any Subsidiary may (i) repurchase the stock of current or former employees, directors or consultants pursuant to stock repurchase agreements or stock purchase plans so long as such repurchases do not exceed [*] in the aggregate per fiscal year, (ii) repurchase the stock of current or former employees, directors or consultants pursuant to stock repurchase agreements by the cancellation of indebtedness owed by such former employees regardless of whether an Event of Default exists, (iii) convert any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, (iv) purchase for value of any rights distributed in connection with any stockholder rights plan, (v) purchases of capital stock or options to acquire such capital stock with the proceeds received from a substantially concurrent issuance of capital stock or convertible securities; (vi) purchases of capital stock pledged as collateral for loans to employees; (vii) purchases of capital stock in connection with (i) the exercise of stock options or stock appreciation rights or (ii) the satisfaction of withholding tax obligations; in each case, by way of cashless (or, "net") exercise; and (viii) cash payments in lieu of the issuance of fractional shares upon conversion of convertible securities; or (b) directly or indirectly make any Investment other than Permitted Investments, or permit any of its Subsidiaries to do so.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower or any of its Subsidiaries, except for (a) transactions that are in the ordinary course of Borrower's or such Subsidiary's business, upon fair and reasonable terms that are no less favorable to Borrower or such Subsidiary than would be obtained in an arm's length transaction with a non-affiliated Person, (b) Subordinated Debt, (c) equity investments by Borrower's investors in Borrower or its Subsidiaries, (d) transactions among Borrower and its Subsidiaries and among Borrower's Subsidiaries, in each case, provided that such transactions are Permitted Investments; (e) reasonable and customary fees paid to members of Borrower's or a Subsidiary's Board of Directors in the ordinary course of business; and (f) employment arrangements in the ordinary course of business.

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to the Lenders.

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7.10 Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to meet the minimum funding requirements of ERISA in excess of [*], permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a Material Adverse Change, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7.11 Compliance with Anti-Terrorism Laws. Collateral Agent hereby notifies Borrower and each of its Subsidiaries that pursuant to the requirements of Anti-Terrorism Laws, and Collateral Agent's policies and practices, Collateral Agent is required to obtain, verify and record certain information and documentation that identifies Borrower and each of its Subsidiaries and their principals, which information includes the name and address of Borrower and each of its Subsidiaries and their principals and such other information that will allow Collateral Agent to identify such party in accordance with Anti-Terrorism Laws. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Borrower and each of its Subsidiaries shall immediately notify Collateral Agent if Borrower or such Subsidiary has knowledge that Borrower, or any Subsidiary or Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

7.12 Assets in Cyto Bermuda. Transfer to, license or permit Cyto Bermuda to hold or maintain, at any time, assets of an aggregate value in excess of [*].

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "**Event of Default**") under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day grace period shall not apply to payments due on the Maturity Date or the date of acceleration pursuant to Section 9.1(a) hereof). During the cure period, the failure to cure the payment default is not an Event of Default (but no Credit Extension will be made during the cure period);

8.2 Covenant Default.

(a) Borrower or any Loan Party fails or neglects to perform any obligation in Sections 6.2 (Financial Statements, Reports, Certificates), 6.4 (Taxes), 6.5 (Insurance), 6.6 (Operating Accounts), 6.9 (Notice of Litigation and Default), 6.11 (Landlord Waivers; Bailee Waivers), 6.12 (Creation/Acquisition of Subsidiaries) or 6.13 (Further Assurances) or Borrower violates any covenant in Section 7; or

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(b) Borrower or any Loan Party fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within [*] after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the [*] period or cannot after diligent attempts by Borrower be cured within such [*] period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed [*] days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Grace periods provided under this Section shall not apply, among other things, to financial covenants or any other covenants set forth in subsection (a) above;

8.3 Material Adverse Change. A Material Adverse Change occurs;

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any of its Subsidiaries or of any entity under control of Borrower or its Subsidiaries on deposit with any Lender or any Lender's Affiliate or any bank or other institution at which Borrower or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy, or assessment is filed against Borrower or any of its Subsidiaries or their respective assets by any government agency, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any [*] cure period; and

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting any part of its business;

8.5 Insolvency. (a) Borrower or any of its Subsidiaries is or becomes Insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while Borrower or any Subsidiary is Insolvent and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in any agreement to which Borrower or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of [*] or that could reasonably be expected to have a Material Adverse Change; provided, however, that the Event of Default under this Section 8.6 caused by the occurrence of a breach or default under such other agreement shall be cured or waived for purposes of this Agreement upon Collateral Agent receiving written notice from the party asserting such breach or default of such cure or waiver of the breach or default under such other agreement, if at the time of such cure or waiver under such other agreement (x) Collateral Agent or any Lender has not declared an Event of Default under this Agreement and/or exercised any rights with respect thereto; (y) any such cure or waiver does not result in an Event of Default under any other provision of this Agreement or any Loan Document; and (z) in connection with any such cure or waiver under such other agreement, the terms of any agreement with such third party are not modified or amended in any manner which could in the good faith business judgment of Collateral Agent be materially less advantageous to Borrower;

8.7 Judgments. One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least [*] (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower or any of its Subsidiaries and shall remain unsatisfied, unvacated, or unstayed for a period of ten (10) days after the entry thereof (provided that no Credit Extensions will be made prior to the satisfaction, vacation, or stay of such judgment, order or decree);

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8.8 Misrepresentations. Borrower or any of its Subsidiaries or any Person acting for Borrower or any of its Subsidiaries makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Collateral Agent and/or Lenders or to induce Collateral Agent and/or the Lenders to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

8.9 Subordinated Debt. A default or breach occurs under any agreement between Borrower or any of its Subsidiaries and any creditor of Borrower or any of its Subsidiaries that signed a subordination, intercreditor, or other similar agreement with Collateral Agent or the Lenders, or any creditor that has signed such an agreement with Collateral Agent or the Lenders breaches any terms of such agreement;

8.10 Governmental Approvals. Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner, or not renewed in the ordinary course for a full term *and* such revocation, rescission, suspension, modification or non-renewal has resulted in or could reasonably be expected to result in a Material Adverse Change; or

8.11 Lien Priority. Any Lien created hereunder or by any other Loan Document shall at any time fail to constitute a valid and perfected Lien on any of the Collateral purported to be secured thereby, subject to no prior or equal Lien, other than Permitted Liens which are permitted to have priority in accordance with the terms of this Agreement.

8.12 Delisting. The shares of common stock of Borrower are delisted from NASDAQ Capital Market because of failure to comply with continued listing standards thereof or due to a voluntary delisting which results in such shares not being listed on any other nationally recognized stock exchange in the United States having listing standards at least as restrictive as the NASDAQ Capital Market.

9. RIGHTS AND REMEDIES

9.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of an Event of Default, Collateral Agent may, and at the written direction of Required Lenders shall, without notice or demand, do any or all of the following: (i) deliver notice of the Event of Default to Borrower, (ii) by notice to Borrower declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations shall be immediately due and payable without any action by Collateral Agent or the Lenders) or (iii) by notice to Borrower suspend or terminate the obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders (but if an Event of Default described in Section 8.5 occurs all obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders shall be immediately terminated without any action by Collateral Agent or the Lenders).

(b) Without limiting the rights of Collateral Agent and the Lenders set forth in Section 9.1(a) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) foreclose upon and/or sell or otherwise liquidate, the Collateral;

(ii) apply to the Obligations any (a) balances and deposits of Borrower that Collateral Agent or any Lender holds or controls, or (b) any amount held or controlled by Collateral Agent or any Lender owing to or for the credit or the account of Borrower; and/or

(iii) commence and prosecute an Insolvency Proceeding or consent to Borrower commencing any Insolvency Proceeding.

(c) Without limiting the rights of Collateral Agent and the Lenders set forth in Sections 9.1(a) and (b) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Collateral Agent considers advisable, notify any Person owing Borrower money of Collateral Agent's security interest in such funds, and verify the amount of such account;

(ii) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Collateral Agent requests and make it available in a location as Collateral Agent reasonably designates. Collateral Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Collateral Agent a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Agent's rights or remedies;

(iii) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, and/or advertise for sale, the Collateral. Collateral Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's and each of its Subsidiaries' labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Agent's exercise of its rights under this Section 9.1, Borrower's and each of its Subsidiaries' rights under all licenses and all franchise agreements inure to Collateral Agent, for the benefit of the Lenders;

(iv) place a "hold" on any account maintained with Collateral Agent or the Lenders and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(v) demand and receive possession of Borrower's Books;

(vi) appoint a receiver to seize, manage and realize any of the Collateral, and such receiver shall have any right and authority as any competent court will grant or authorize in accordance with any applicable law, including any power or authority to manage the business of Borrower or any of its Subsidiaries;

(vii) subject to clauses 9.1(a) and (b), exercise all rights and remedies available to Collateral Agent and each Lender under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof);

(viii) for any Letters of Credit, demand that Borrower (i) deposit cash with Bank in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then [*]; and (y) if such Letters of Credit are denominated in a Foreign Currency, then [*], of the Dollar Equivalent of the aggregate face amount of all Letters of Credit remaining undrawn (plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment)), to secure all of the Obligations relating to such Letters of Credit, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all letter of credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit; and

(ix) terminate any FX Contracts.

Notwithstanding any provision of this Section 9.1 to the contrary, upon the occurrence of any Event of Default, Collateral Agent shall have the right to exercise any and all remedies referenced in this Section 9.1 without the written consent of Required Lenders following the occurrence of an Exigent Circumstance. As used in the immediately preceding sentence, "**Exigent Circumstance**" means any event or circumstance that, in the reasonable judgment of Collateral Agent, imminently threatens the ability of Collateral Agent to realize upon all or any material

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portion of the Collateral, such as, without limitation, fraudulent removal, concealment, or abscondment thereof, destruction or material waste thereof, or failure of Borrower or any of its Subsidiaries after reasonable demand to maintain or reinstate adequate casualty insurance coverage, or which, in the judgment of Collateral Agent, could reasonably be expected to result in a material diminution in value of the Collateral.

9.2 Power of Attorney. Borrower hereby irrevocably appoints Collateral Agent as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's or any of its Subsidiaries' name on any checks or other forms of payment or security; (b) sign Borrower's or any of its Subsidiaries' name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Collateral Agent determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Collateral Agent or a third party as the Code or any applicable law permits. Borrower hereby appoints Collateral Agent as its lawful attorney-in-fact to sign Borrower's or any of its Subsidiaries' name on any documents necessary to perfect or continue the perfection of Collateral Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations) have been satisfied in full and Collateral Agent and the Lenders are under no further obligation to make Credit Extensions hereunder. Collateral Agent's foregoing appointment as Borrower's or any of its Subsidiaries' attorney in fact, and all of Collateral Agent's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Collateral Agent's and the Lenders' obligation to provide Credit Extensions terminates.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document, Collateral Agent may obtain such insurance or make such payment, and all amounts so paid by Collateral Agent are Lenders' Expenses and immediately due and payable, bearing interest at the Default Rate, and secured by the Collateral. Collateral Agent will make reasonable efforts to provide Borrower with notice of Collateral Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No such payments by Collateral Agent are deemed an agreement to make similar payments in the future or Collateral Agent's waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) Borrower irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by Collateral Agent from or on behalf of Borrower or any of its Subsidiaries of all or any part of the Obligations, and, as between Borrower on the one hand and Collateral Agent and Lenders on the other, Collateral Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Collateral Agent may deem advisable notwithstanding any previous application by Collateral Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral shall be applied: first, to the Lenders' Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other indebtedness or obligations of Borrower owing to Collateral Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation "ratably," "proportionally" or in similar terms shall refer to Pro Rata Share unless expressly provided otherwise. Collateral Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender's portion of any Term Loan and the ratable distribution of interest, fees and reimbursements paid or made by Borrower.

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Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to Collateral Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Collateral Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender's ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lenders' claims. To the extent any payment for the account of Borrower is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for Collateral Agent and other Lenders for purposes of perfecting Collateral Agent's security interest therein.

9.5 Liability for Collateral. So long as Collateral Agent and the Lenders comply with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Collateral Agent and the Lenders, Collateral Agent and the Lenders shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Failure by Collateral Agent or any Lender, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Collateral Agent or any Lender thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by Collateral Agent and the Required Lenders and then is only effective for the specific instance and purpose for which it is given. The rights and remedies of Collateral Agent and the Lenders under this Agreement and the other Loan Documents are cumulative. Collateral Agent and the Lenders have all rights and remedies provided under the Code, any applicable law, by law, or in equity. The exercise by Collateral Agent or any Lender of one right or remedy is not an election, and Collateral Agent's or any Lender's waiver of any Event of Default is not a continuing waiver. Collateral Agent's or any Lender's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives, to the fullest extent permitted by law, demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Collateral Agent or any Lender on which Borrower or any Subsidiary is liable.

10. NOTICES

All notices, consents, requests, approvals, demands, or other communication (collectively, "**Communication**") by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by facsimile transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Any of Collateral Agent, Lender or Borrower may change its mailing address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower: CYTOKINETICS, INCORPORATED
280 East Grand Avenue
South San Francisco, CA 94080
Attn: Chief Financial Officer
Fax: (650) 624-3200
Email: sbarbari@cytokinetics.com

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with a copy (which shall not constitute notice) to:	Cooley LLP 101 California Street, 5th Floor San Francisco, CA Attn: Tammy Weng Fax: (415) 693-2222 Email: tweng@cooley.com
If to Collateral Agent:	OXFORD FINANCE LLC 133 North Fairfax Street Alexandria, Virginia 22314 Attention: Legal Department Fax: (703) 519-5225 Email: LegalDepartment@oxfordfinance.com
with a copy to	SILICON VALLEY BANK 555 Mission Street, Suite 900 San Francisco, CA 94105 Attn: Jackie Spencer Fax: (415) 615-0076 Email: jspencer@svb.com
with a copy (which shall not constitute notice) to:	DLA Piper LLP (US) 4365 Executive Drive, Suite 1100 San Diego, California 92121-2133 Attn: Troy Zander Fax: (858) 638-5086 Email: troy.zander@dlapiper.com

11. CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER, AND JUDICIAL REFERENCE

California law governs the loan documents without regard to principles of conflicts of law. Borrower, collateral agent and each lender each submit to the exclusive jurisdiction of the state and federal courts in Santa Clara County, California; provided, however, that nothing in this agreement shall be deemed to operate to preclude collateral agent or any lender from bringing suit or taking other legal action in any other jurisdiction to realize on the collateral or any other security for the obligations, or to enforce a judgment or other court order in favor of collateral agent or any lender. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to borrower at the address set forth in, or subsequently provided by borrower in accordance with, section 10 of this agreement and that service so made shall be deemed completed upon the earlier to occur of borrower's actual receipt thereof or three (3) days after deposit in the u.s. mails, proper postage prepaid.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER, COLLATERAL AGENT AND EACH LENDER EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR EACH PARTY TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

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WITHOUT INTENDING IN ANY WAY TO LIMIT THE PARTIES' AGREEMENT TO WAIVE THEIR RESPECTIVE RIGHT TO A TRIAL BY JURY, if the above waiver of the right to a trial by jury is not enforceable, the parties hereto agree that any and all disputes or controversies of any nature between them arising at any time shall be decided by a reference to a private judge, mutually selected by the parties (or, if they cannot agree, by the Presiding Judge of the Santa Clara County, California Superior Court) appointed in accordance with California Code of Civil Procedure Section 638 (or pursuant to comparable provisions of federal law if the dispute falls within the exclusive jurisdiction of the federal courts), sitting without a jury, in Santa Clara County, California; and the parties hereby submit to the jurisdiction of such court. The reference proceedings shall be conducted pursuant to and in accordance with the provisions of California Code of Civil Procedure §§ 638 through 645.1, inclusive. The private judge shall have the power, among others, to grant provisional relief, including without limitation, entering temporary restraining orders, issuing preliminary and permanent injunctions and appointing receivers. All such proceedings shall be closed to the public and confidential and all records relating thereto shall be permanently sealed. If during the course of any dispute, a party desires to seek provisional relief, but a judge has not been appointed at that point pursuant to the judicial reference procedures, then such party may apply to the Santa Clara County, California Superior Court for such relief. The proceeding before the private judge shall be conducted in the same manner as it would be before a court under the rules of evidence applicable to judicial proceedings. The parties shall be entitled to discovery which shall be conducted in the same manner as it would be before a court under the rules of discovery applicable to judicial proceedings. The private judge shall oversee discovery and may enforce all discovery rules and orders applicable to judicial proceedings in the same manner as a trial court judge. The parties agree that the selected or appointed private judge shall have the power to decide all issues in the action or proceeding, whether of fact or of law, and shall report a statement of decision thereon pursuant to California Code of Civil Procedure § 644(a). Nothing in this paragraph shall limit the right of any party at any time to exercise self-help remedies, foreclose against collateral, or obtain provisional remedies. The private judge shall also determine all issues relating to the applicability, interpretation, and enforceability of this paragraph.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not transfer, pledge or assign this Agreement or any rights or obligations under it without Collateral Agent's and each Lender's prior written consent (which may be granted or withheld in Collateral Agent's and each Lender's discretion, subject to Section 12.6). The Lenders have the right, without the consent of or notice to Borrower, to sell, transfer, assign, pledge, negotiate, or grant participation in (**any** such sale, transfer, assignment, negotiation, or grant of a participation, a "**Lender Transfer**") all or any part of, or any interest in, the Lenders' obligations, rights, and benefits under this Agreement and the other Loan Documents; *provided, however*, that any such Lender Transfer (other than a transfer, pledge, sale or assignment to an Eligible Assignee) of its obligations, rights, and benefits under this Agreement and the other Loan Documents shall require the prior written consent of the Required Lenders (such approved assignee, an "**Approved Lender**"). Borrower and Collateral Agent shall be entitled to continue to deal solely and directly with such Lender in connection with the interests so assigned until Collateral Agent shall have received and accepted an effective assignment agreement in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee or Approved Lender as Collateral Agent reasonably shall require. Notwithstanding anything to the contrary contained herein, so long as no Event of Default has occurred and is continuing, no Lender Transfer (other than a Lender Transfer (i) in respect of the Warrants or (ii) in connection with (x) assignments by a Lender due to a forced divestiture at the request of any regulatory agency; or (y) upon the occurrence of a default, event of default or similar occurrence with respect to a Lender's own financing or securitization transactions) shall be permitted, without Borrower's consent, to any Person which is an Affiliate or Subsidiary of Borrower, a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent.

12.2 Indemnification. Borrower agrees to indemnify, defend and hold Collateral Agent and the Lenders and their respective directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Collateral Agent or the Lenders (each, an "**Indemnified Person**") harmless against: (a) all obligations, demands, claims, and liabilities (collectively, "**Claims**") asserted by any other party in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents; and (b) all losses or Lenders' Expenses incurred, or paid by Indemnified Person in connection with; related to; following; or arising

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from, out of or under, the transactions contemplated by the Loan Documents between Collateral Agent, and/or the Lenders and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence or willful misconduct. Borrower hereby further indemnifies, defends and holds each Indemnified Person harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including the fees and disbursements of counsel for such Indemnified Person) in connection with any investigative, response, remedial, administrative or judicial matter or proceeding, whether or not such Indemnified Person shall be designated a party thereto and including any such proceeding initiated by or on behalf of Borrower, and the reasonable expenses of investigation by engineers, environmental consultants and similar technical personnel and any commission, fee or compensation claimed by any broker (other than any broker retained by Collateral Agent or Lenders) asserting any right to payment for the transactions contemplated hereby which may be imposed on, incurred by or asserted against such Indemnified Person as a result of or in connection with the transactions contemplated hereby and the use or intended use of the proceeds of the loan proceeds except for liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements directly caused by such Indemnified Person's gross negligence or willful misconduct.

12.3 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.5 Correction of Loan Documents. Collateral Agent and the Lenders may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties, so long as Collateral Agent provides Borrower with written notice of such correction and allows Borrower at least ten (10) days to object to such correction. In the event of such objection, such correction shall not be made except by an amendment signed by both Collateral Agent, the Lenders and Borrower.

12.6 Amendments in Writing; Integration. (a) No amendment, modification, termination or waiver of any provision of this Agreement or any other Loan Document, no approval or consent thereunder, or any consent to any departure by Borrower or any of its Subsidiaries therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower, Collateral Agent and the Required Lenders provided that:

(i) no such amendment, waiver or other modification that would have the effect of increasing or reducing a Lender's Term Loan Commitment or Commitment Percentage shall be effective as to such Lender without such Lender's written consent;

(ii) no such amendment, waiver or modification that would affect the rights and duties of Collateral Agent shall be effective without Collateral Agent's written consent or signature;

(iii) no such amendment, waiver or other modification shall, unless signed by all the Lenders directly affected thereby, (A) reduce the principal of, rate of interest on or any fees with respect to any Term Loan or forgive any principal, interest (other than default interest) or fees (other than late charges) with respect to any Term Loan (B) postpone the date fixed for, or waive, any payment of principal of any Term Loan or of interest on any Term Loan (other than default interest) or any fees provided for hereunder (other than late charges or for any termination of any commitment); (C) change the definition of the term "**Required Lenders**" or the percentage of Lenders which shall be required for the Lenders to take any action hereunder; (D) release all or substantially all of any material portion of the Collateral, authorize Borrower to sell or otherwise dispose of all or substantially all or any material portion of the Collateral or release any Guarantor of all or any portion of the Obligations or its guaranty obligations with respect thereto, except, in each case with respect to this clause (D), as otherwise may be expressly permitted under this Agreement or the other Loan Documents (including in connection with any disposition permitted hereunder); (E) amend, waive or otherwise modify this Section 12.6 or the definitions of the terms used in this Section 12.6 insofar as the definitions affect the substance of this Section 12.6; (F) consent to the assignment, delegation or other transfer by Borrower of any of its rights and obligations under any Loan Document or release Borrower of its payment obligations under any Loan Document, except, in each case with

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respect to this clause (F), pursuant to a merger or consolidation permitted pursuant to this Agreement; (G) amend any of the provisions of Section 9.4 or amend any of the definitions of Pro Rata Share, Term Loan Commitment, Commitment Percentage or that provide for the Lenders to receive their Pro Rata Shares of any fees, payments, setoffs or proceeds of Collateral hereunder; (H) subordinate the Liens granted in favor of Collateral Agent securing the Obligations; or (I) amend any of the provisions of Section 12.10. It is hereby understood and agreed that all Lenders shall be deemed directly affected by an amendment, waiver or other modification of the type described in the preceding clauses (C), (D), (E), (F), (G) and (H) of the preceding sentence;

(iv) the provisions of the foregoing clauses (i), (ii) and (iii) are subject to the provisions of any interlender or agency agreement among the Lenders and Collateral Agent pursuant to which any Lender may agree to give its consent in connection with any amendment, waiver or modification of the Loan Documents only in the event of the unanimous agreement of all Lenders.

(b) Other than as expressly provided for in Section 12.6(a)(i)-(iii), Collateral Agent may, if requested by the Required Lenders, from time to time designate covenants in this Agreement less restrictive by notification to a representative of Borrower.

(c) This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement.

12.8 Survival. All covenants, representations and warranties made in this Agreement continue in full force and effect until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. Without limiting the foregoing, except as otherwise provided in Section 4.1, the grant of security interest by Borrower in Section 4.1 shall survive until the termination of all Bank Services Agreements. The obligation of Borrower in Section 12.2 to indemnify each Lender and Collateral Agent, as well as the confidentiality provisions in Section 12.9 below, shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.9 Confidentiality. In handling any confidential information of Borrower, the Lenders and Collateral Agent shall exercise the same degree of care that it exercises for their own proprietary information, but disclosure of information may be made: (a) subject to the terms and conditions of this Agreement, to the Lenders' and Collateral Agent's Subsidiaries or Affiliates, or in connection with a Lender's own financing or securitization transactions and upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; (b) to prospective transferees (other than those identified in (a) above) or purchasers of any interest in the Credit Extensions (provided, however, the Lenders and Collateral Agent shall, except upon the occurrence and during the continuance of an Event of Default, obtain such prospective transferee's or purchaser's agreement to the terms of this provision or to similar confidentiality terms); (c) as required by law, regulation, subpoena, or other order; (d) to Lenders' or Collateral Agent's regulators or as otherwise required in connection with an examination or audit; (e) as Collateral Agent reasonably considers appropriate in exercising remedies under the Loan Documents; and (f) to third party service providers of the Lenders and/or Collateral Agent so long as such service providers have executed a confidentiality agreement with the Lenders and Collateral Agent with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in the Lenders' and/or Collateral Agent's possession when disclosed to the Lenders and/or Collateral Agent, or becomes part of the public domain after disclosure to the Lenders and/or Collateral Agent; or (ii) is disclosed to the Lenders and/or Collateral Agent by a third party, if the Lenders and/or Collateral Agent does not know that the third party is prohibited from disclosing the information. Collateral Agent and the Lenders may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis. The provisions of the immediately

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preceding sentence shall survive the termination of this Agreement. The agreements provided under this Section 12.9 supersede all prior agreements, understanding, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.9.

12.10 Right of Set Off. Borrower hereby grants to Collateral Agent and to each Lender, a lien, security interest and right of set off as security for all Obligations to Collateral Agent and each Lender hereunder, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Collateral Agent or the Lenders or any entity under the control of Collateral Agent or the Lenders (including a Collateral Agent affiliate) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Collateral Agent or the Lenders may set off the same or any part thereof and apply the same to any liability or obligation of Borrower even though unmatured and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE COLLATERAL AGENT TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.

12.11 Silicon Valley Bank as Agent. Collateral Agent hereby appoints Silicon Valley Bank ("**SVB**") as its agent (and SVB hereby accepts such appointment) for the purpose of perfecting Collateral Agent's Liens in assets which, in accordance with Article 8 or Article 9, as applicable, of the Code can be perfected by possession or control, including without limitation, all deposit accounts maintained at SVB.

12.12 Cooperation of Borrower. If necessary, Borrower agrees to (i) execute any documents (including new Secured Promissory Notes) reasonably required to effectuate and acknowledge each assignment of a Term Loan Commitment or Loan to an assignee in accordance with Section 12.1, (ii) make Borrower's management available to meet with Collateral Agent and prospective participants and assignees of Term Loan Commitments or Credit Extensions (which meetings shall be conducted no more often than twice every twelve months unless an Event of Default has occurred and is continuing) during normal business hours and upon reasonable prior written notice (unless an Event of Default has occurred and is continuing), and (iii) assist Collateral Agent or the Lenders in the preparation of information relating to the financial affairs of Borrower as any prospective participant or assignee of a Term Loan Commitment or Term Loan reasonably may request. Subject to the provisions of Section 12.9, Borrower authorizes each Lender to disclose to any prospective participant or assignee of a Term Loan Commitment, any and all information in such Lender's possession concerning Borrower and its financial affairs which has been delivered to such Lender by or on behalf of Borrower pursuant to this Agreement, or which has been delivered to such Lender by or on behalf of Borrower in connection with such Lender's credit evaluation of Borrower prior to entering into this Agreement.

12.13 International Tax Structure. Collateral Agent and Lenders acknowledge that Borrower is contemplating the International Tax Structure. In the event that Collateral Agent and Lenders consent to the International Tax Structure, Collateral Agent and Lenders agree to use their good faith business judgment, determined from the perspective of a senior secured lender, to negotiate an amendment to incorporate such transaction into the Loan Documents.

13. DEFINITIONS

13.1 Definitions. As used in this Agreement, the following terms have the following meanings:

"**Account**" is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

"**Account Debtor**" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

"**Affiliate**" of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

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"**Agreement**" is defined in the preamble hereof.

"**Amortization Date**" is, November 1, 2017.

"**Annual Projections**" is defined in Section 6.2(a).

"**Anti-Terrorism Laws**" are any laws relating to terrorism or money laundering, including Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

"**Approved Fund**" is any (i) investment company, fund, trust, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business or (ii) any Person (other than a natural person) which temporarily warehouses loans for any Lender or any entity described in the preceding clause (i) and that, with respect to each of the preceding clauses (i) and (ii), is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender.

"**Approved Lender**" is defined in Section 12.1.

"**Bank Services**" are any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank's various agreements related thereto (each, a "**Bank Services Agreement**").

"**Bank**" is defined in the preamble hereof.

"**Basic Rate**" is, with respect to a Term Loan, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the greater of (i) seven and one-half percent (7.50%) and (ii) the sum of (a) the thirty (30) day U.S. LIBOR rate reported in the Wall Street Journal three (3) Business Days prior to the Funding Date of such Term Loan, plus (b) seven and thirty-one hundredths percent (7.31%); provided that the Basic Rate shall not be adjusted upward unless and until the thirty (30) day U.S. LIBOR rate reported in the Wall Street Journal exceed sixty-nine hundredths percent (0.69%).

"**Blocked Person**" is any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports "terrorism" as defined in Executive Order No. 13224, or (e) a Person that is named a "specially designated national" or "blocked person" on the most current list published by OFAC or other similar list.

"**Borrower**" is defined in the preamble hereof.

"**Borrower's Books**" are Borrower's or any of its Subsidiaries' books and records including ledgers, federal, and state tax returns, records regarding Borrower's or its Subsidiaries' assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

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"**Business Day**" is any day that is not a Saturday, Sunday or a day on which Collateral Agent is closed.

"**Cash Equivalents**" are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc., and (c) certificates of deposit maturing no more than one (1) year after issue provided that the account in which any such certificate of deposit is maintained is subject to a Control Agreement in favor of Collateral Agent. For the avoidance of doubt, the direct purchase by Borrower or any of its Subsidiaries of any Auction Rate Securities, or purchasing participations in, or entering into any type of swap or other derivative transaction, or otherwise holding or engaging in any ownership interest in any type of Auction Rate Security by Borrower or any of its Subsidiaries shall be conclusively determined by the Lenders as an ineligible Cash Equivalent, and any such transaction shall expressly violate each other provision of this Agreement governing Permitted Investments. Notwithstanding the foregoing, Cash Equivalents does not include and Borrower, and each of its Subsidiaries, are prohibited from purchasing, purchasing participations in, entering into any type of swap or other equivalent derivative transaction, or otherwise holding or engaging in any ownership interest in any type of debt instrument, including, without limitation, any corporate or municipal bonds with a long-term nominal maturity for which the interest rate is reset through a dutch auction and more commonly referred to as an auction rate security (each, an "**Auction Rate Security**").

"**Claims**" are defined in Section 12.2.

"**Code**" is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of California; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Agent's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of California, the term "Code" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

"**Collateral**" is any and all properties, rights and assets of Borrower described on Exhibit A.

"**Collateral Account**" is any Deposit Account, Securities Account, or Commodity Account, or any other bank account maintained by Borrower or any Loan Party at any time.

"**Collateral Agent**" is, Oxford, not in its individual capacity, but solely in its capacity as agent on behalf of and for the benefit of the Lenders.

"**Commitment Percentage**" is set forth in Schedule 1.1, as amended from time to time.

"**Commodity Account**" is any "commodity account" as defined in the Code with such additions to such term as may hereafter be made.

"**Communication**" is defined in Section 10.

"**Compliance Certificate**" is that certain certificate in the form attached hereto as Exhibit C.

"**Contingent Obligation**" is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but "Contingent Obligation" does not include endorsements in

the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

"**Control Agreement**" is any control agreement entered into among the depository institution at which Borrower or any of its Subsidiaries maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower or any of its Subsidiaries maintains a Securities Account or a Commodity Account, Borrower and such Subsidiary, and Collateral Agent pursuant to which Collateral Agent obtains control (within the meaning of the Code) for the benefit of the Lenders over such Deposit Account, Securities Account, or Commodity Account.

"**Copyrights**" are any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

"**Credit Extension**" is any Term Loan or any other extension of credit by Collateral Agent or Lenders for Borrower's benefit.

"**Cyto Bermuda**" is Cytokinetics (Bermuda) Ltd., an entity organized under the laws of Bermuda and a wholly-owned Subsidiary of Borrower.

"**Default Rate**" is defined in Section 2.3(b).

"**Deposit Account**" is any "deposit account" as defined in the Code with such additions to such term as may hereafter be made.

"**Designated Deposit Account**" is Borrower's deposit account disclosed in the Perfection Certificate dated as of the Effective Date and maintained with Bank.

"**Disbursement Letter**" is that certain form attached hereto as Exhibit B-1.

"**Dollar Equivalent**" is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

"**Dollars,**" "**dollars**" and "**$**" each mean lawful money of the United States.

"**Effective Date**" is defined in the preamble of this Agreement.

"**Eligible Assignee**" is (i) a Lender, (ii) an Affiliate of a Lender, (iii) an Approved Fund and (iv) any commercial bank, savings and loan association or savings bank or any other entity which is an "accredited investor" (as defined in Regulation D under the Securities Act of 1933, as amended) and which extends credit or buys loans as one of its businesses, including insurance companies, mutual funds, lease financing companies and commercial finance companies, in each case, which either (A) has a rating of BBB or higher from Standard & Poor's Rating Group and a rating of Baa2 or higher from Moody's Investors Service, Inc. at the date that it becomes a Lender or (B) has total assets in excess of Five Billion Dollars ($5,000,000,000.00), and in each case of clauses (i) through (iv), which, through its applicable lending office, is capable of lending to Borrower without the imposition of any withholding or similar taxes; provided that notwithstanding the foregoing, "Eligible Assignee" shall not include, unless an Event of Default has occurred and is continuing, (i) Borrower or any of Borrower's Affiliates or Subsidiaries or (ii) a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent. Notwithstanding the foregoing, (x) in connection with assignments by a Lender due to a forced divestiture at the request of any regulatory agency, the restrictions set forth herein shall not apply and Eligible Assignee shall mean

any Person or party and (y) in connection with a Lender's own financing or securitization transactions, the restrictions set forth herein shall not apply and Eligible Assignee shall mean any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Collateral Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee as Collateral Agent reasonably shall require.

"**Equipment**" is all "equipment" as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

"**Equity Event**" is the receipt by Borrower on or after the Effective Date of unrestricted net cash proceeds of not less than [*] from the issuance and sale by Borrower of its equity securities.

"**ERISA**" is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

"**Event of Default**" is defined in Section 8.

"**Final Payment**" is a payment (in addition to and not a substitution for the regular monthly payments of principal plus accrued interest) due on the earliest to occur of (a) the Maturity Date, or (b) the acceleration of any Term Loan, or (c) the prepayment of a Term Loan pursuant to Section 2.2(c) or (d), equal to the original principal amount of such Term Loan multiplied by the Final Payment Percentage, payable to Lenders in accordance with their respective Pro Rata Shares.

"**Final Payment Percentage**" is four percent (4.00%).

"**Foreign Currency**" means lawful money of a country other than the United States.

"**Foreign Subsidiary**" is a Subsidiary that is not an entity organized under the laws of the United States or any territory thereof.

"**Funding Date**" is any date on which a Credit Extension is made to or on account of Borrower which shall be a Business Day.

"**FX Contract**" is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency on a specified date.

"**GAAP**" is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession in the United States, which are applicable to the circumstances as of the date of determination.

"**General Intangibles**" are all "general intangibles" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security

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and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

"**Governmental Approval**" is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

"**Governmental Authority**" is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

"**Guarantor**" is any Person providing a Guaranty in favor of Collateral Agent.

"**Guaranty**" is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Indebtedness**" is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

"**Indemnified Person**" is defined in Section 12.2.

"**Insolvency Proceeding**" is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"**Insolvent**" means not Solvent.

"**Intellectual Property**" means all of Borrower's or any Subsidiary's right, title and interest in and to the following:

(a) its Copyrights, Trademarks and Patents;

(b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(c) any and all source code;

(d) any and all design rights which may be available to Borrower;

(e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and

(f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

"**International Tax Structure**" means the contemplated transfer of its ex-US intellectual property rights relating to clinical drug candidates pursuant to which Borrower intends to Transfer the Intellectual Property to Cyto Bermuda and/or its Subsidiaries would subsequently license rights to the Intellectual Property from Borrower and/or its Subsidiaries.

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"**Inventory**" is all "inventory" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of any Person's custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

"**Investment**" is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance, payment or capital contribution to any Person.

"**Key Person**" is each of Borrower's (i) [*], who is [*] as of the Effective Date, (ii) [*], who is [*] as of the Effective Date and (iii) [*], who is [*] as of the Effective Date.

"**Lender**" is any one of the Lenders.

"**Lenders**" are the Persons identified on Schedule 1.1 hereto and each assignee that becomes a party to this Agreement pursuant to Section 12.1.

"**Lenders' Expenses**" are all audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred by Collateral Agent and/or the Lenders in connection with the Loan Documents.

"**Letter of Credit**" is a standby or commercial letter of credit issued by Bank upon request of Borrower based upon an application, guarantee, indemnity, or similar agreement.

"**Lien**" is a claim, mortgage, deed of trust, levy, charge, pledge, security interest, or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

"**Loan Documents**" are, collectively, this Agreement, the Warrants, the Perfection Certificates, each Compliance Certificate, each Disbursement Letter, each Loan Payment/Advance Request Form and any Bank Services Agreement, [the Post Closing Letter,] any subordination agreements, any note, or notes or guaranties executed by Borrower or any other Person, and any other present or future agreement entered into by Borrower, any Guarantor or any other Person for the benefit of the Lenders and Collateral Agent in connection with this Agreement; all as amended, restated, or otherwise modified.

"**Loan Party**" is each of Borrower and any Subsidiary of Borrower that is a co borrower or Guarantor hereunder.

"**Loan Payment/Advance Request Form**" is that certain form attached hereto as Exhibit B-2.

"**Material Adverse Change**" is (a) a material impairment in the perfection or priority of Collateral Agent's Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations or condition (financial or otherwise) of Borrower or Borrower and its Subsidiaries, taken as a whole; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

"**Maturity Date**" is October 1, 2020.

"**Obligations**" are all of Borrower's obligations to pay when due any debts, principal, interest, Lenders' Expenses, the Prepayment Fee, the Final Payment, and other amounts Borrower owes the Lenders now or later, in connection with, related to, following, or arising from, out of or under, this Agreement or, the other Loan Documents (other than the Warrants), or otherwise, including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin (whether or not allowed) and debts, liabilities, or obligations of Borrower assigned to the Lenders and/or Collateral Agent, and the performance of Borrower's duties under the Loan Documents (other than the Warrants).

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"**OFAC**" is the U.S. Department of Treasury Office of Foreign Assets Control.

"**OFAC Lists**" are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

"**Operating Documents**" are, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

"**Patents**" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

"**Payment Date**" is the first (1st) calendar day of each calendar month, commencing on November 1, 2015.

"**Perfection Certificate**" and "**Perfection Certificates**" is defined in Section 5.1.

"**Permitted Indebtedness**" is:

(a) Borrower's Indebtedness to the Lenders and Collateral Agent under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date and disclosed on the Perfection Certificate(s);

(c) Subordinated Debt;

(d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;

(e) Indebtedness consisting of capitalized lease obligations and purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such person, provided that (i) the aggregate outstanding principal amount of all such Indebtedness does not exceed [*] at any time and (ii) the principal amount of such Indebtedness does not exceed the lower of the cost or fair market value of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);

(f) any obligations owing Bank with respect to corporate credit cards or merchant services issued by Bank for the account of Borrower or any Subsidiary in an aggregate amount outstanding at any time not to exceed [*];

(g) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect Borrower or a Subsidiary against fluctuation in interest rates, currency exchange rates or commodity prices, in an aggregate amount not to exceed [*] at any time;

(h) Indebtedness in respect of letters of credit, bank guarantees and similar instruments issued for the account of the Borrower or any Subsidiary in the ordinary course of business supporting obligations

under (A) workers' compensation, unemployment insurance and other social security laws and (B) bids, trade contracts, leases, statutory obligations, surety and appeal bonds, performance bonds and obligations of a like nature; in an aggregate amount for (A) and (B) not to exceed [*] at any time;

(i) Indebtedness constituting or consisting of Investments under clause (f) of the definition of "Permitted Investments;"

(j) Indebtedness with respect to [*], with Collateral Agent's and Required Lenders' prior written consent, provided that no Event of Default exists at the time of incurring such Indebtedness or would result after giving effect thereto;

(k) Other unsecured Indebtedness not to exceed [*] in the aggregate at any time; and

(l) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (k) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose materially more burdensome terms upon Borrower, or its Subsidiary, as the case may be.

"**Permitted Investments**" are:

(a) Investments disclosed on the Perfection Certificate(s) and existing on the Effective Date;

(b) (i) Investments consisting of cash and Cash Equivalents, and (ii) any other Investments permitted by Borrower's investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Collateral Agent;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of deposit, securities and/or commodities accounts in which Collateral Agent has a perfected security interest (other than foreign accounts, to the extent not required under Section 6.6);

(e) Investments in connection with Transfers permitted by Section 7.1 and Investments permitted under Section 7.3;

(f) Investments (i) by Borrower in Subsidiaries that are not Loan Parties not to exceed [*] in the aggregate in any fiscal year; and (ii) by Borrower or any Subsidiary in or to any Loan Party;

(g) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's Board of Directors; not to exceed [*] in the aggregate for (i) and (ii) in any fiscal year;

(h) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(i) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (h) shall not apply to Investments of Borrower in any Subsidiary;

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(j) Investments constituting interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect Borrower or a Subsidiary against fluctuation in interest rates, currency exchange rates or commodity prices, in an aggregate amount not to exceed [*] at any time;

(k) Investments in joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology and licensing that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discreet geographical areas outside of the United States or Europe, the development of technology or the providing of technical support, provided that any cash investments by Borrower do not exceed [*] in the aggregate in any fiscal year;

(l) the formation or acquisition of Subsidiaries after the Effective Date, subject to compliance with Section 6.12 of this Agreement;

(m) Investments consisting of the conversion or settlement of any convertible securities of Borrower or any Subsidiary or otherwise in exchange therefor; and

(n) Other Investments not to exceed [*]

"**Permitted Licenses**" are (A) (i) licenses of over-the-counter software that is commercially available to the public, (ii) licenses granted pursuant to the Collaboration and Option Agreement between Amgen Inc. and Borrower dated as of December 29, 2006, as amended from time to time, and (iii) licenses granted pursuant to the Amended and Restated Licenses and Collaboration Agreement between Borrower and Astellas dated December 22, 2014, as amended from time to time, and (B) non-exclusive and exclusive licenses for the use of the Intellectual Property of Borrower or any of its Subsidiaries entered into in the ordinary course of business, provided, that, with respect to each such license described in clause (B), (i) no Event of Default has occurred or is continuing at the time of such license; (ii) the license constitutes an arms-length transaction, the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property and do not restrict the ability of Borrower or any of its Subsidiaries, as applicable, to pledge, grant a security interest in or lien on, or assign or otherwise Transfer any Intellectual Property; (iii) in the case of any exclusive license, (x) Borrower delivers ten (10) days' prior written notice and a brief summary of the terms of the proposed license to Collateral Agent and the Lenders and delivers to Collateral Agent and the Lenders copies of the final executed licensing documents in connection with the exclusive license promptly upon consummation thereof, and (y) any such license could not result in a legal transfer of title of the licensed property but may be exclusive in respects other than territory and may be exclusive as to territory only as to discrete geographical areas outside of the United States; and (iv) all upfront payments, royalties, milestone payments or other proceeds arising from the licensing agreement that are payable to Borrower or any of its Subsidiaries are paid to a Deposit Account that is governed by a Control Agreement.

"**Permitted Liens**" are:

(a) Liens existing on the Effective Date and disclosed on the Perfection Certificates or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) liens securing Indebtedness permitted under clause (e) of the definition of "**Permitted Indebtedness,**" provided that (i) such liens exist prior to the acquisition of, or attach substantially simultaneous with, or within twenty (20) days after the, acquisition, lease, repair, improvement or construction of, such property financed or leased by such Indebtedness and (ii) such liens do not extend to any property of Borrower other than the property (and proceeds thereof) acquired, leased or built, or the improvements or repairs, financed by such Indebtedness;

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(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed [*], and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Collateral Agent or any Lender a security interest therein;

(g) banker's liens, rights of setoff and Liens in favor of financial institutions incurred in the ordinary course of business arising in connection with Borrower's deposit accounts or securities accounts held at such institutions solely to secure payment of fees and similar costs and expenses and provided such accounts are maintained in compliance with Section 6.6(b) hereof;

(h) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7;

(i) Liens consisting of Permitted Licenses;

(j) Liens incurred or deposits made in the ordinary course of Borrower's or a Subsidiary's business, securing liabilities to secure the performance of tenders, statutory obligations, surety, bid and appeal bonds, bids, leases, government contracts, trade contracts, performance and return-of-money bonds and other similar obligations;

(k) easements, reservations, rights-of-way, restrictions, minor defects or irregularities in title and other similar Liens affecting real property not interfering in any material respect with the ordinary course of the business of Borrower;

(l) Liens or deposits to secure the performance of leases incurred in the ordinary course of business and not representing an obligation for borrowed money and Liens to secure tenant improvements, provided the lessor thereof has executed a landlord consent in favor of, and in form and content reasonably acceptable to, Collateral Agent;

(m) Liens in favor of customs and revenue authorities arising as a matter of law, in the ordinary course of Borrower's business, to secure payment of customs duties in connection with the importation of goods;

(n) Liens in connection with a royalty-based financing permitted under Permitted Indebtedness; and

(o) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (n), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase; except as permitted under clause (m) of Permitted Indebtedness.

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"**Person**" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

[**"Post Closing Letter**" is that certain Post Closing Letter dated as of the Effective Date by and between Collateral Agent and Borrower.]

"**Prepayment Fee**" is, with respect to any Term Loan subject to prepayment prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to the Lenders in amount equal to:

(i) for a prepayment made on or after the Funding Date of such Term Loan through and including the first anniversary of the Funding Date of such Term Loan, three percent (3.00%) of the principal amount of such Term Loan prepaid;

(ii) for a prepayment made after the date which is after the first anniversary of the Funding Date of such Term Loan through and including the second anniversary of the Funding Date of such Term Loan, two percent (2.00%) of the principal amount of the Term Loans prepaid; and

(iii) for a prepayment made after the second anniversary of the Funding Date of such Term Loan and prior to the Maturity Date, one percent (1.00%) of the principal amount of the Term Loans prepaid.

"**Pro Rata Share**" is, as of any date of determination, with respect to each Lender, a percentage (expressed as a decimal, rounded to the ninth decimal place) determined by dividing the outstanding principal amount of Term Loans held by such Lender by the aggregate outstanding principal amount of all Term Loans.

"**Registered Organization**" is any "registered organization" as defined in the Code with such additions to such term as may hereafter be made.

"**Required Lenders**" means (i) for so long as all of the Persons that are Lenders on the Effective Date (each an "**Original Lender**") have not assigned or transferred any of their interests in their Term Loan, Lenders holding one hundred percent (100%) of the aggregate outstanding principal balance of the Term Loan, or (ii) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan, Lenders holding at least sixty six percent (66%) of the aggregate outstanding principal balance of the Term Loan and, in respect of this clause (ii), (A) each Original Lender that has not assigned or transferred any portion of its Term Loan, (B) each assignee or transferee of an Original Lender's interest in the Term Loan, but only to the extent that such assignee or transferee is an Affiliate or Approved Fund of such Original Lender, and (C) any Person providing financing to any Person described in clauses (A) and (B) above; provided, however, that this clause (C) shall only apply upon the occurrence of a default, event of default or similar occurrence with respect to such financing.

"**Requirement of Law**" is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"**Responsible Officer**" is any of the President, Chief Executive Officer, or Chief Financial Officer of Borrower acting alone.

"**Second Draw Period**" is the period commencing on the date of the occurrence of the Second Draw Period Milestones and ending on the earliest of (i) ninety (90) days from the date of Borrower's achievement of the Second Draw Period Milestones; (ii) June 30, 2016; and (iii) the occurrence of an Event of Default; provided, however, that the Second Draw Period shall not commence if on the date of the occurrence of the Second Draw Period Milestones an Event of Default has occurred and is continuing.

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"**Second Draw Period Milestones**" is the achievement of each of the following: (i) [*] Phase 3 clinical trial of tirasemtiv in patients with ALS (VITALITY-ALS), (ii) [*] Phase 2 clinical trial of CK2127107 (CY 5021); and (iii) [*] data from the Phase 2 clinical trial of omecamtiv mecarbil (COSMIC-HF) [*]; each, in form and content reasonably acceptable to Collateral Agent and the Lenders.

"**Secured Promissory Note**" is defined in Section 2.4.

"**Secured Promissory Note Record**" is a record maintained by each Lender with respect to the outstanding Obligations owed by Borrower to Lender and credits made thereto.

"**Securities Account**" is any "securities account" as defined in the Code with such additions to such term as may hereafter be made.

"**Shares**" is one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or Borrower's Subsidiary, in any Subsidiary; provided that, (x) in the event Borrower demonstrates to Collateral Agent's reasonable satisfaction, that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary which is a Foreign Subsidiary, creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code, and (y) solely with respect to Cyto Bermuda, "Shares" shall mean sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or its Subsidiary in such Foreign Subsidiary.

"**Solvent**" is, with respect to any Person: the fair salable value of such Person's consolidated assets (including goodwill minus disposition costs) exceeds the fair value of such Person's liabilities; such Person is not left with unreasonably small capital after the transactions in this Agreement; and such Person is able to pay its debts (including trade debts) as they mature.

"**Subordinated Debt**" is indebtedness incurred by Borrower or any of its Subsidiaries subordinated to all Indebtedness of Borrower and/or its Subsidiaries to the Lenders (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Collateral Agent and the Lenders entered into between Collateral Agent, Borrower, and/or any of its Subsidiaries, and the other creditor), on terms acceptable to Collateral Agent and the Lenders.

"**Subsidiary**" is, with respect to any Person, any Person of which more than fifty percent (50%) of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled, directly or indirectly, by such Person or through one or more intermediaries.

"**Term A Loan**" is defined in Section 2.2(a)(i) hereof.

"**Term B Loan**" is defined in Section 2.2(a)(ii) hereof.

"**Term C Loan**" is defined in Section 2.2(a)(iii) hereof.

"**Term Loan**" is defined in Section 2.2(a)(iii) hereof.

"**Term Loan Commitment**" is, for any Lender, the obligation of such Lender to make a Term Loan, up to the principal amount shown on Schedule 1.1. "**Term Loan Commitments**" means the aggregate amount of such commitments of all Lenders.

"**Third Draw Period**" is the period after the Term B Loan has been made, commencing on the date Borrower has achieved the Third Draw Period Milestones and ending on the earliest of (i) ninety (90) days from the date of Borrower's achievement of the Third Draw Period Milestones; (ii) March 31, 2017; and (iii) the occurrence of an Event of Default; provided, however, that the Third Draw Period shall not commence if on the date of the occurrence of the Third Draw Period Milestones an Event of Default has occurred and is continuing.

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"**Third Draw Period Milestones**" is the earlier of (i) the occurrence of the Equity Event, or (ii) [*] data from VITALITY-ALS Phase 3 trial [*], in form and content reasonably acceptable to Collateral Agent and the Lenders.

"**Trademarks**" means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

"**Transfer**" is defined in Section 7.1.

"**Warrants**" are those certain Warrants to Purchase Stock dated as of the Effective Date, or any date thereafter, issued by Borrower in favor of each Lender or such Lender's Affiliates.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

CYTOKINETICS, INCORPORATED

By *\/s\/ Sharon A. Barbari*
Name: Sharon A. Barbari
Title: EVP FINANCE and CFO

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By *\/s\/ Mark Davis*
Name: Mark Davis
Title: Vice President-Finance, Secretary & Treasurer

LENDER:

SILICON VALLEY BANK

By *\/s\/ Jackie Spencer*
Name: Jackie Spencer
Title: Director

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SCHEDULE 1.1

Lenders and Commitments

Term A Loans

Lender	Term Loan Commitment	Commitment Percentage
OXFORD FINANCE LLC	$ [*]	[*]%
SILICON VALLEY BANK	$ [*]	[*]%
TOTAL	**$ 15,000,000.00**	**100.00%**

Term B Loans

Lender	Term Loan Commitment	Commitment Percentage
OXFORD FINANCE LLC	$ [*]	[*]%
SILICON VALLEY BANK	$ [*]	[*]%
TOTAL	**$ 15,000,000.00**	**100.00%**

Term C Loans

Lender	Term Loan Commitment	Commitment Percentage
OXFORD FINANCE LLC	$ [*]	[*]%
SILICON VALLEY BANK	$ [*]	[*]%
TOTAL	**$ 10,000,000.00**	**100.00%**

Aggregate (all Term Loans)

Lender	Term Loan Commitment	Commitment Percentage
OXFORD FINANCE LLC	$ [*]	[*]%
SILICON VALLEY BANK	$ [*]	[*]%
TOTAL	**$ 40,000,000.00**	**100.00%**

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EXHIBIT A

Description of Collateral

The Collateral consists of all of Borrower's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any Foreign Subsidiary, if Borrower demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code; and (iii) any license, contract or interest of Borrower as a lessee under an Equipment lease, in each case if the granting of a Lien in such license, contract or interest is prohibited by or would constitute a default under the agreement governing such license, contract or interest (but (A) only to the extent such prohibition is enforceable under applicable law and (B) other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-408 or 9-409 (or any other Section) of Division 9 of the Code); provided that upon the termination, lapsing or expiration of any such prohibition, such license, contract or interest, as applicable, shall automatically be subject to the security interest granted in favor of Collateral Agent hereunder and become part of the "Collateral**.**"

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Borrower has agreed not to encumber any of its Intellectual Property.

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EXHIBIT B-1

Form of Disbursement Letter

[see attached]

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DISBURSEMENT LETTER

October 19, 2015

The undersigned, being the duly elected and acting of CYTOKINETICS, INCORPORATED, a Delaware corporation with offices located at 280 East Grand Avenue, South San Francisco, CA 94080 ("**Borrower**"), does hereby certify to **OXFORD FINANCE LLC** ("**Oxford**" and "**Lender**"), as collateral agent (the "**Collateral Agent**") in connection with that certain Loan and Security Agreement dated as of October 19, 2015, by and among Borrower, Collateral Agent and the Lenders from time to time party thereto (the "**Loan Agreement**"; with other capitalized terms used below having the meanings ascribed thereto in the Loan Agreement) that:

1. The representations and warranties made by Borrower in Section 5 of the Loan Agreement and in the other Loan Documents are true and correct in all material respects as of the date hereof.

2. No event or condition has occurred that would constitute an Event of Default under the Loan Agreement or any other Loan Document.

3. Borrower is in compliance with the covenants and requirements contained in Sections 4, 6 and 7 of the Loan Agreement.

4. All conditions referred to in Section 3 of the Loan Agreement to the making of the Loan to be made on or about the date hereof have been satisfied or waived by Collateral Agent.

5. No Material Adverse Change has occurred.

6. The undersigned is a Responsible Officer.

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7. The proceeds of the Term A Loan shall be disbursed as follows:

Disbursement from Oxford:		
Loan Amount	$	[*]
Plus:		
—Deposit Received	$	[*]
Less:		
—Interim Interest	($	)
—Lender's Legal Fees	($	)*
Net Proceeds due from Oxford:	$	
Disbursement from SVB:		
Loan Amount	$	[*]
Plus:		
—Deposit Received	$	
Less:		
—Interim Interest	($	)
Net Proceeds due from SVB:	$	
TOTAL TERM A LOAN NET PROCEEDS FROM LENDERS	$	

8. The Term A Loan shall amortize in accordance with the Amortization Table attached hereto.

9. The aggregate net proceeds of the Term Loans shall be transferred to the Designated Deposit Account as follows:

Account Name:	CYTOKINETICS, INCORPORATED
Bank Name:	SILICON VALLEY BANK
Bank Address:	3003 Tasman Drive Santa Clara, California 95054
Account Number:	[*]
ABA Number:	[*]

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* Legal fees and costs are through the Effective Date. Post-closing legal fees and costs, payable after the Effective Date, to be invoiced and paid post-closing.

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Dated as of the date first set forth above.

BORROWER:

CYTOKINETICS, INCORPORATED

By _____
Name: _____
Title: _____

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By _____
Name: _____
Title: _____

LENDER:
SILICON VALLEY BANK

By _____
Name: _____
Title: _____

[*Balance of Page Intentionally Left Blank*]

[*Signature Page to Disbursement Letter*]

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FORM OF AMORTIZATION TABLE

Oxford Finance & SVB

Amortization Table

Cytokinetics AA01

Start Date:
Interest Rate:
Term:

Payment:
Final Payment:
Amount:
Interim Interest Days:
Interim Interest:

Disclaimer:
THIS IS A STANDARD AMORTIZATION SCHEDULE. IT IS NOT INTENDED TO BE USED FOR PAYOFF PURPOSES.

PMT No.	Payment Date	Beginning Balance	Monthly Payment	Interest	Principal	Ending Balance
		Totals				

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EXHIBIT B-2

Loan Payment/Advance Request Form

DEADLINE FOR SAME DAY PROCESSING IS NOON PACIFIC TIME*

Fax To: Date: _____

LOAN PAYMENT:

CYTOKINETICS, INCORPORATED

From Account # _____ (Deposit Account #) To Account # _____ (Loan Account #)

Principal $ _____ and/or Interest $ _____

Authorized Signature: _____ Phone Number: _____
Print Name/Title: _____

LOAN ADVANCE:

Complete *Outgoing Wire Request* section below if all or a portion of the funds from this loan advance are for an outgoing wire.

From Account # _____ (Loan Account #) To Account # _____ (Deposit Account #)

Amount of Advance $ _____

All Borrower's representations and warranties in the Loan and Security Agreement are true, correct and complete in all material respects on the date of the request for an advance; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date:

Authorized Signature: _____ Phone Number: _____
Print Name/Title: _____

OUTGOING WIRE REQUEST:
Complete only if all or a portion of funds from the loan advance above is to be wired.
Deadline for same day processing is noon, Pacific Time

Beneficiary Name: _____ Amount of Wire: $ _____
Beneficiary Bank: _____ Account Number: _____
City and State: _____

Beneficiary Bank Transit (ABA) #: _____ Beneficiary Bank Code (Swift, Sort, Chip, etc.): _____
(For International Wire Only)
Intermediary Bank: _____ Transit (ABA) #: _____
For Further Credit to: _____

Special Instruction: _____

By signing below, I (we) acknowledge and agree that my (our) funds transfer request shall be processed in accordance with and subject to the terms and conditions set forth in the agreements(s) covering funds transfer service(s), which agreements(s) were previously received and executed by me (us).

Authorized Signature: _____ 2nd Signature (if required): _____
Print Name/Title: _____ Print Name/Title: _____
Telephone #: _____ Telephone #: _____

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EXHIBIT C

Compliance Certificate

TO: OXFORD FINANCE LLC, as Collateral Agent and Lender
SILICON VALLEY BANK, as Lender

FROM: CYTOKINETICS, INCORPORATED

The undersigned authorized officer ("**Officer**") of CYTOKINETICS, INCORPORATED ("**Borrower**"), hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement by and among Borrower, Collateral Agent, and the Lenders from time to time party thereto (the "**Loan Agreement;**" capitalized terms used but not otherwise defined herein shall have the meanings given them in the Loan Agreement),

(a) Borrower is in complete compliance for the period ending with all required covenants except as noted below;

(b) There are no Events of Default, except as noted below;

(c) Except as noted below, all representations and warranties of Borrower stated in the Loan Documents are true and correct in all material respects on this date and for the period described in (a), above; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date.

(d) Borrower, and each of Borrower's Subsidiaries, has timely filed all required tax returns and reports, Borrower, and each of Borrower's Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower, or Subsidiary, except as otherwise permitted pursuant to the terms of Section 5.8 of the Loan Agreement;

(e) No Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Collateral Agent and the Lenders.

Attached are the required documents, if any, supporting our certification(s). The Officer, on behalf of Borrower, further certifies that the attached financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes and except, in the case of unaudited financial statements, for the absence of footnotes and subject to year-end audit adjustments as to the interim financial statements.

Please indicate compliance status since the last Compliance Certificate by circling Yes, No, or N/A under "Complies" column.

	Reporting Covenant	Requirement	Actual	Complies		
1)	Financial statements	Quarterly within 45 days		Yes	No	N/A
2)	Annual (CPA Audited) statements	Within 95 days after FYE		Yes	No	N/A
3)	Annual Financial Projections/Budget (prepared on a monthly basis)	Annually (within 60 days of FYE), and when revised		Yes	No	N/A

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4)	A/R & A/P agings	If applicable		Yes	No	N/A
5)	8-K, 10-K and 10-Q Filings	Upon filing and if otherwise applicable, within 5 days of filing				
6)	Compliance Certificate	Quarterly within 45 days		Yes	No	N/A
7)	Cash Certificate	Monthly within 30 days		Yes	No	N/A
8)	IP Report	When required		Yes	No	N/A
9)	Total amount of Borrower's cash and cash equivalents at the last day of the measurement period		$	Yes	No	N/A
10)	Total amount of Borrower's Subsidiaries' cash and cash equivalents at the last day of the measurement period		$	Yes	No	N/A

Deposit and Securities Accounts
(Please list all accounts; attach separate sheet if additional space needed)

	Institution Name	**Account Number**	**New Account?**		**Account Control Agreement in place?**	
1)			Yes	No	Yes	No
2)			Yes	No	Yes	No
3)			Yes	No	Yes	No
4)			Yes	No	Yes	No

Financial Covenants [None]

Other Matters

1)	Have there been any changes in management since the last Compliance Certificate?	Yes	No
2)	Have there been any transfers/sales/disposals/retirement of Collateral or IP prohibited by the Loan Agreement?	Yes	No
3)	Have there been any new or pending claims or causes of action against Borrower that involve more than Two Hundred Fifty Thousand Dollars ($250,000.00)?	Yes	No
4)	Have there been any amendments of or other changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate.	Yes	No

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Exceptions

Please explain any exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions." Attach separate sheet if additional space needed.)

CYTOKINETICS, INCORPORATED

By _____
Name: _____
Title: _____

Date:

LENDER USE ONLY

Received by: _____ Date: _____

Verified by: _____ Date: _____

Compliance Status: Yes No

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ANNEX I

Monthly Cash Certificate

Monthly Cash Certificate: Date:

TO: OXFORD FINANCE LLC, as Collateral Agent and Lender
SILICON VALLEY BANK, as Lender

FROM: CYTOKINETICS, INCORPORATED

For month ending:	, 20
Total amount of Borrower's cash and cash equivalents at the last day of the measurement period	$
Total amount of Borrower's Subsidiaries' cash and cash equivalents at the last day of the measurement period	$
Consolidated Monthly Cash Burn for the measurement period	$

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EXHIBIT D

Form of Secured Promissory Note

[see attached]

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SECURED PROMISSORY NOTE

(Term A Loan)

$ Dated: October 19, 2015

FOR VALUE RECEIVED, the undersigned, CYTOKINETICS, INCORPORATED, a Delaware corporation with offices located at 280 East Grand Avenue, South San Francisco, CA 94080 ("**Borrower**") HEREBY PROMISES TO PAY to the order of [OXFORD FINANCE LLC][SILICON VALLEY BANK] ("**Lender**") the principal amount of [ ] MILLION DOLLARS ($) or such lesser amount as shall equal the outstanding principal balance of the Term A Loan made to Borrower by Lender, plus interest on the aggregate unpaid principal amount of such Term A Loan, at the rates and in accordance with the terms of the Loan and Security Agreement dated October 19, 2015 by and among Borrower, Lender, Oxford Finance LLC, as Collateral Agent, and the other Lenders from time to time party thereto (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**"). If not sooner paid, the entire principal amount and all accrued and unpaid interest hereunder shall be due and payable on the Maturity Date as set forth in the Loan Agreement. Any capitalized term not otherwise defined herein shall have the meaning attributed to such term in the Loan Agreement.

Principal, interest and all other amounts due with respect to the Term A Loan, are payable in lawful money of the United States of America to Lender as set forth in the Loan Agreement and this Secured Promissory Note (this "**Note**"). The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

The Loan Agreement, among other things, (a) provides for the making of a secured Term A Loan by Lender to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.

This Note may not be prepaid except as set forth in Section 2.2 (c) and Section 2.2(d) of the Loan Agreement.

This Note and the obligation of Borrower to repay the unpaid principal amount of the Term A Loan, interest on the Term A Loan and all other amounts due Lender under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

Borrower shall pay all reasonable fees and expenses, including, without limitation, reasonable attorneys' fees and costs, incurred by Lender in the enforcement or attempt to enforce any of Borrower's obligations hereunder not performed when due.

This Note shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of California.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by Lender or its agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation. Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

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IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

CYTOKINETICS, INCORPORATED

By _____
Name: _____
Title: _____

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LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By

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CORPORATE BORROWING CERTIFICATE

BORROWER: CYTOKINETICS, INCORPORATED **DATE:** October 19, 2015
LENDERS: OXFORD FINANCE LLC, as Collateral Agent and Lender
SILICON VALLEY BANK, as Lender

I hereby certify as follows, as of the date set forth above:

1. I am the Secretary, Assistant Secretary or other officer of Borrower. My title is as set forth below.

2. Borrower's exact legal name is set forth above. Borrower is a corporation existing under the laws of the State of Delaware.

3. Attached hereto as Exhibit A and Exhibit B, respectively, are true, correct and complete copies of (i) Borrower's Certificate of Incorporation (including amendments), as filed with the Secretary of State of the state in which Borrower is incorporated as set forth in paragraph 2 above; and (ii) Borrower's Bylaws. Neither such Certificate of Incorporation nor such Bylaws have been amended, annulled, rescinded, revoked or supplemented, and such Certificate of Incorporation and such Bylaws remain in full force and effect as of the date hereof.

4. The following resolutions were duly and validly adopted by Borrower's Board of Directors at a duly held meeting of such directors (or pursuant to a unanimous written consent or other authorized corporate action). Such resolutions are in full force and effect as of the date hereof and have not been in any way modified, repealed, rescinded, amended or revoked, and the Lenders may rely on them until each Lender receives written notice of revocation from Borrower.

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RESOLVED, that **any one** of the following officers or employees of Borrower, whose names, titles and signatures are below, may act on behalf of Borrower:

Name	Title	Signature	Authorized to Add or Remove Signatories
			☐
			☐
			☐
			☐

RESOLVED FURTHER, that **any one** of the persons designated above with a checked box beside his or her name may, from time to time, add or remove any individuals to and from the above list of persons authorized to act on behalf of Borrower.

RESOLVED FURTHER, that such individuals may, on behalf of Borrower:

Borrow Money. Borrow money from the Lenders.

Execute Loan Documents. Execute any loan documents any Lender requires.

Grant Security. Grant Collateral Agent a security interest in any of Borrower's assets.

Negotiate Items. Negotiate or discount all drafts, trade acceptances, promissory notes, or other indebtedness in which Borrower has an interest and receive cash or otherwise use the proceeds.

Issue Warrants. Issue warrants for Borrower's capital stock.

Further Acts. Designate other individuals to request advances, pay fees and costs and execute other documents or agreements (including documents or agreement that waive Borrower's right to a jury trial) they believe to be necessary to effectuate such resolutions.

RESOLVED FURTHER, that all acts authorized by the above resolutions and any prior acts relating thereto are ratified.

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5. The persons listed above are Borrower's officers or employees with their titles and signatures shown next to their names.

By: _____

Name: _____

Title: _____

**** If the Secretary, Assistant Secretary or other certifying officer executing above is designated by the resolutions set forth in paragraph 4 as one of the authorized signing officers, this Certificate must also be signed by a second authorized officer or director of Borrower.*

I, the [print title] of Borrower, hereby certify as to paragraphs 1 through 5 above, as of the date set forth above.

By: _____

Name: _____

Title: _____

[Signature Page to Corporate Borrowing Certificate]

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EXHIBIT A

Certificate of Incorporation (including amendments)

[see attached]

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AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
CYTOKINETICS, INCORPORATED

Cytokinetics, Incorporated, a corporation organized and existing under the laws of the State Of Delaware, hereby certifies as follows:

A. The original Certificate of Incorporation of the corporation was filed with the Secretary of State of the State of Delaware on August 5, 1997.

B. Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware (the "**DGCL**"), this Amended and Restated Certificate of Incorporation restates and amends the provisions of the Amended and Restated Certificate of Incorporation of the corporation.

C. This Amended and Restated Certificate of Incorporation has been duly approved by the Board of Directors and the stockholders of the corporation in accordance with Sections 242 and 245 of the DGCL.

D. The Certificate of Incorporation of the corporation is hereby amended and restated in its entirety to read as follows:

ARTICLE I

The name of the corporation is Cytokinetics, Incorporated.

ARTICLE II

The address of the corporation's registered office in the State of Delaware is 2711 Centerville Road, Suite 400, City of Wilmington, County of New Castle 19808. The name of its registered agent at such address is CorpAmerica, Inc.

ARTICLE III

The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the DGCL.

ARTICLE IV

The corporation shall have authority to issue shares as follows:

170,000,000 shares of Common Stock, par value $0.001 per share. Each share of Common Stock shall entitle the holder thereof to one (1) vote on each matter submitted to a vote at a meeting of stockholders.

10,000,000 shares of Preferred Stock, par value $0.001 per share, which may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board of Directors). The Board of Directors is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of Preferred Stock, including without limitation authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing.

The Board of Directors is further authorized to increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any series, the number of which was fixed by it, subsequent to the issuance of shares of such series then

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outstanding, subject to the powers, preferences and rights, and the qualifications, limitations and restrictions thereof stated in the Certificate of Incorporation or the resolution of the Board of Directors originally fixing the number of shares of such series. If the number of shares of any series is so decreased, then the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

ARTICLE V

The number of directors that constitutes the entire Board of Directors of the corporation shall be determined in the manner set forth in the Bylaws of the corporation. At each annual meeting of stockholders, directors of the corporation shall be elected to hold office until the expiration of the term for which they are elected and until their successors have been duly elected and qualified; except that if any such election shall not be so held, such election shall take place at a stockholders' meeting called and held in accordance with the DGCL.

The directors of the corporation shall be divided into three classes as nearly equal in size as is practicable, hereby designated Class I, Class II and Class III. The term of office of the initial Class I directors shall expire at the first regularly-scheduled annual meeting of the stockholders following the effective date of this corporation's initial public offering (the "**Effective Date**"), the term of office of the initial Class II directors shall expire at the second annual meeting of the stockholders following the Effective Date and the term of office of the initial Class III directors shall expire at the third annual meeting of the stockholders following the Effective Date. At each annual meeting of stockholders, commencing with the first regularly-scheduled annual meeting of stockholders following the Effective Date, each of the successors elected to replace the directors of a Class whose term shall have expired at such annual meeting shall be elected to hold office until the third annual meeting next succeeding his or her election and until his or her respective successor shall have been duly elected and qualified.

Notwithstanding the foregoing provisions of this Article, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation, or removal. If the number of directors is hereafter changed, any newly created directorships or decrease in directorships shall be so apportioned among the classes as to make all classes as nearly equal in number as is practicable, provided that no decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Any director may be removed from office by the stockholders of the corporation only for cause. Vacancies occurring on the Board of Directors for any reason and newly created directorships resulting from an increase in the authorized number of directors may be filled only by vote of a majority of the remaining members of the Board of Directors, although less than a quorum, at any meeting of the Board of Directors. A person so elected by the Board of Directors to fill a vacancy or newly created directorship shall hold office until the next election of the Class for which such director shall have been chosen and until his or her successor shall have been duly elected and qualified.

ARTICLE VI

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the corporation is expressly authorized to adopt, amend or repeal the Bylaws of the corporation.

ARTICLE VII

The election of directors need not be by written ballot unless the Bylaws of the corporation shall so provide.

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ARTICLE VIII

No action shall be taken by the stockholders of the corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws, and no action shall be taken by the stockholders by written consent. The affirmative vote of sixty-six and two-thirds percent (66 2/3%) of the then outstanding voting securities of the corporation, voting together as a single class, shall be required for the amendment, repeal or modification of the provisions of Article V, Article VI or Article VIII of this Certificate of Incorporation or Sections 2.1 (Place of Meetings), 2.2 (Annual Meeting), 2.3 (Special Meeting), 2.4 (Advance Notice Procedures; Notice of Stockholders' Meetings), 2.9 (Voting), or 3.2 (Number of Directors) of the corporation's Bylaws.

ARTICLE IX

The corporation shall indemnify and hold harmless, to the fullest extent permitted by the DGCL as it presently exists or may hereafter be amended, any director or officer of the corporation 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 he or she, or a person for whom he or she is the legal representative, is or was a director, officer, employee or agent of the corporation or 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, trust, enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such Proceeding. The corporation shall be required to indemnify a person in connection with a Proceeding initiated by such person only if the Proceeding was authorized by the Board.

The corporation shall have the power to indemnify and hold harmless, to the extent permitted by applicable law as it presently exists or may hereafter be amended, any employee or agent of the corporation who was or is made or is threatened to be made a party or is otherwise involved in any Proceeding by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was an employee or agent of the corporation or 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, trust, enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such Proceeding.

Neither any amendment nor repeal of this Article IX, nor the adoption of any provision of this corporation's Certificate of Incorporation inconsistent with this Article IX, shall eliminate or reduce the effect of this Article IX in respect of any matter occurring, or any cause of action, suit or claim accruing or arising or that, but for this Article IX, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE X

Except as provided in Article IX above, the corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

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IN WITNESS WHEREOF, Cytokinetics, Incorporated has caused this Amended and Restated Certificate of Incorporation to be signed by the President and Chief Executive Officer of the corporation on this 4th day of June 2008.

By: /s/ Robert I. Blum
Robert I. Blum
President and Chief Executive Officer

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CYTOKINETICS, INCORPORATED

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES A CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

CYTOKINETICS, INCORPORATED, a Delaware corporation (the "**Corporation**"), in accordance with the provisions of Section 103 of the Delaware General Corporation Law (the "DGCL") does hereby certify that, in accordance with Sections 141(c) and 151 of the DGCL, the following resolution was duly adopted by the Board of Directors of the Corporation as of April 14, 2011:

RESOLVED, that the Board of Directors of the Corporation pursuant to authority expressly vesting in it by the provisions of the Certificate of Incorporation of the Corporation, hereby authorizes the issuance of a series of Preferred Stock designated as the Series A Convertible Preferred Stock, par value $0.001 per share, of the Corporation and hereby fixes the designation, number of shares, powers, preferences, rights, qualifications, limitations and restrictions thereof (in addition to any provisions set forth in the Certificate of Incorporation of the Corporation which are applicable to the Preferred Stock of all classes and series) as follows:

SERIES A CONVERTIBLE PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"**Affiliate**" means any person or entity that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a person or entity, as such terms are used in and construed under Rule 144 under the Securities Act . With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

"**Alternate Consideration**" shall have the meaning set forth in Section 7(b).

"**Beneficial Ownership Limitation**" shall have the meaning set forth in Section 6(c).

"**Business Day**" means any day except Saturday, Sunday, any day which shall be a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"**Buy-In**" shall have the meaning set forth in Section 6(d)(iii).

"**Closing Sale Price**" means, for any security as of any date, the last closing trade price for such security prior to 4:00 p.m., New York City time, on the principal securities exchange or trading market where such security is listed or traded, as reported by Bloomberg, L.P. (or an equivalent, reliable reporting service mutually acceptable to and hereafter designated by Holders of a majority of the then-outstanding Series A Preferred Stock and the Corporation), or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, L.P., or, if no last trade price is reported for such security by Bloomberg, L.P., the average of the bid prices

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of any market makers for such security as reported on the OTC Pink Market by OTC Markets Group, Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined in good faith by the Board of Directors of the Corporation.

"**Commission**" means the Securities and Exchange Commission.

"**Common Stock**" means the Corporation's common stock, par value $0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed into.

"**Common Stock Equivalents**" means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"**Conversion Date**" shall have the meaning set forth in Section 6(a).

"**Conversion Price**" shall mean $1.50, as adjusted pursuant to paragraph 7 hereof.

"**Conversion Ratio**" shall have the meaning set forth in Section 6(b).

"**Conversion Shares**" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock in accordance with the terms hereof.

"**Daily Failure Amount**" means the product of (x) .005 multiplied by (y) the Closing Sale Price of the Common Stock on the applicable Share Delivery Date.

"**DGCL**" shall mean the Delaware General Corporation Law.

"**Distributions**" shall have the meaning set forth in Section 5(a).

"**DWAC Delivery**" shall have the meaning set forth in Section 6(a).

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"**Fundamental Transaction**" shall have the meaning set forth in Section 7(b).

"**Holder**" means any holder of Series A Preferred Stock.

"**Issuance Date**" means the date of the "Closing" as defined in that certain Securities Purchase Agreement, dated April 18, 2011, by and among the Corporation and the "Investors" named therein (the "**Securities Purchase Agreement**").

"**Investors**" shall have the meaning given to such term in the Securities Purchase Agreement.

"**Junior Securities**" shall have the meaning set forth in Section 5(a).

"**Notice of Conversion**" shall have the meaning set forth in Section 6(a).

"**Parity Securities**" shall have the meaning set forth in Section 5(a).

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"**Person**" means any individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"**Senior Securities**" shall have the meaning set forth in Section 5(a).

"**Series A Preferred Stock Register**" shall have the meaning set forth in Section 2(b).

"**Share Delivery Date**" shall have the meaning set forth in Section 6(d).

"**Stated Value**" shall mean $1,500.00.

"**Trading Day**" means a day on which the Common Sock is traded for any period on the principal securities exchange or if the Common Stock is not traded on a principal securities exchange, on a day that the Common Stock is traded on another securities market on which the Common Stock is then being traded.

Section 2. Designation, Amount and Par Value; Assignment.

a) The series of preferred stock designated by this Certificate shall be designated as the Corporation's Series A Convertible Preferred Stock (the "**Series A Preferred Stock**") and the number of shares so designated shall be 8,070 (which shall not be subject to increase without the written consent of the Holders of a majority of the issued and outstanding Series A Preferred Stock). Each share of Series A Preferred Stock shall have a par value of $0.001 per share.

b) The Corporation shall register shares of the Series A Preferred Stock, upon records to be maintained by the Corporation for that purpose (the "**Series A Preferred Stock Register**"), in the name of the Holders thereof from time to time. The Corporation may deem and treat the registered Holder of shares of Series A Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. The Corporation shall register the transfer of any shares of Series A Preferred Stock in the Series A Preferred Stock Register, upon surrender of the certificates evidencing such shares to be transferred, duly endorsed by the Holder thereof, to the Corporation at its address specified herein. Upon any such registration or transfer, a new certificate evidencing the shares of Series A Preferred Stock so transferred shall be issued to the transferee and a new certificate evidencing the remaining portion of the shares not so transferred, if any, shall be issued to the transferring Holder, in each case, within three Business Days. The provisions of this Certificate are intended to be for the benefit of all Holders from time to time and shall be enforceable by any such Holder.

Section 3. Dividends. Holders shall not be entitled to receive any dividends in respect of the Series A Preferred Stock, unless and until specifically declared by the Board of Directors of the Corporation to be payable to the Holders of the Series A Preferred Stock.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the DGCL, the Series A Preferred Stock shall have no voting rights. However, as long as any shares of Series A Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Series A Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series A Preferred Stock or alter or amend this Certificate, (b) increase the number of authorized shares of Series A Preferred Stock, or (c) enter into any agreement with respect to any of the foregoing.

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Section 5. Rank; Liquidation.

a) The Series A Preferred Stock shall rank (i) senior to all of the Common Stock; (ii) senior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms junior to any Series A Preferred Stock ("**Junior Securities**"); (iii) on parity with any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms on parity with the Series A Preferred Stock ("**Parity Securities**"); and (iv) junior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms senior to any Series A Preferred Stock ("**Senior Securities**"), in each case, as to distributions of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntarily or involuntarily (all such distributions being referred to collectively as "**Distributions**").

b) Subject to the prior and superior rights of the holders of any Senior Securities of the Corporation, upon liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, each holder of shares of Series A Preferred Stock shall be entitled to receive, in preference to any distributions of any of the assets or surplus funds of the Corporation to the holders of the Common Stock and Junior Securities and pari passu with any distribution to the holders of Parity Securities, an amount equal to $0.001 per share of Series A Preferred Stock, plus an additional amount equal to any dividends declared but unpaid on such shares, before any payments shall be made or any assets distributed to holders of any class of Common Stock or Junior Securities. If, upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation shall be insufficient to pay the holders of shares of the Series A Preferred Stock the amount required under the preceding sentence, then all remaining assets of the Corporation shall be distributed ratably to holders of the shares of the Series A Preferred Stock and Parity Securities.

Section 6. Conversion.

a) Conversions at Option of Holder. Each share of Series A Preferred Stock shall be convertible, at any time and from time to time from and after the Issuance Date, at the option of the Holder thereof, into a number of shares of Common Stock equal to the Conversion Ratio. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as **Annex A** (a "**Notice of Conversion**"), duly completed and executed. Other than a conversion following a Fundamental Transaction or following a notice provided for under Section 7(d)(ii) hereof, the Notice of Conversion must specify at least a number of shares of Series A Preferred Stock to be converted equal to the lesser of (x) 100 shares (such number subject to appropriate adjustment following the occurrence of an event specified in Section 7(a) hereof) and (y) the number of shares of Series A Preferred Stock then held by the Holder. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer program, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "**DWAC Delivery**"). The "**Conversion Date**", or the date on which a conversion shall be deemed effective, shall be defined as the Trading Day that the Notice of Conversion, completed and executed, is sent by facsimile to, and received during regular business hours by, the Corporation; provided that the original certificate(s) representing such shares of Series A Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original shares of Series A Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

b) Conversion Ratio. The "Conversion Ratio" for each share of Series A Preferred Stock shall be equal to the Stated Value divided by the Conversion Price.

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c) Beneficial Ownership Limitation. Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of the Series A Preferred Stock, and a Holder shall not have the right to convert any portion of the Series A Preferred Stock, to the extent that, after giving effect to an attempted conversion set forth on an applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member) would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Series A Preferred Stock subject to the Notice of Conversion with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series A Preferred Stock beneficially owned by such Holder or any of its Affiliates, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Affiliates that are subject to a limitation on conversion or exercise similar to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this Section 6(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission. For purposes of this Section 6(c), it is understood that the number of shares of Common Stock beneficially owned by each Investor shall be aggregated with each other Investor for purposes of Section 13(d) of the Exchange Act. For purposes of this Section 6(c), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (A) the Corporation's most recent periodic or annual filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation that is filed with the Commission or (C) a more recent notice by the Corporation or the Corporation's transfer agent to the Holder setting forth the number of shares of Common Stock then outstanding. Upon the written request of a Holder (which may be by email), the Corporation shall, within three (3) Trading Days thereof, confirm in writing to such Holder (which may be via email) the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of securities of the Corporation, including shares of Series A Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was last publicly reported or confirmed to the Holder. The "**Beneficial Ownership Limitation**" shall be 9.98% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion (to the extent permitted pursuant to this Section 6(c)). The Corporation shall be entitled to rely on representations made to it by the Holder in any Notice of Conversion regarding its Beneficial Ownership Limitation.

d) Mechanics of Conversion

i. Delivery of Certificate or Electronic Issuance Upon Conversion. Not later than three Trading Days after the applicable Conversion Date, or if the Holder requests the issuance of physical certificate(s), two Trading Days after receipt by the Corporation of the original certificate(s) representing such shares of Series A Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "**Share Delivery Date**"), the Corporation shall (a) deliver, or cause to be delivered, to the converting Holder a physical certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Series A Preferred Stock or (b) in the case of a DWAC Delivery, electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its

DWAC system. If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Conversion Notice by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Series A Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Series A Preferred Stock unsuccessfully tendered for conversion to the Corporation.

ii. Obligation Absolute. Subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Series A Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. Subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, in the event a Holder shall elect to convert any or all of its Series A Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or any one associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Series A Preferred Stock of such Holder shall have been sought and obtained by the Corporation, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the value of the Conversion Shares into which would be converted the Series A Preferred Stock which is subject to such injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall, subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, issue Conversion Shares upon a properly noticed conversion. If the Corporation fails to deliver to a Holder such certificate or certificates, or electronically deliver (or cause its transfer agent to electronically deliver) such shares in the case of a DWAC Delivery, pursuant to Section 6(d)(i) on or prior to the fifth (5th) Trading Day after the Share Delivery Date applicable to such conversion (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), then, unless the Holder has rescinded the applicable Conversion Notice pursuant to Section 6(d)(i) above, the Corporation shall pay (as liquidated damages and not as a penalty) to such Holder an amount payable, at the Corporation's option, either (a) in cash or (b) in shares of Common Stock that are valued for these purposes at the Closing Sale Price on the date of such calculation, in each case equal to the product of (x) the number of Conversion Shares required to have been issued by the Corporation on such Share Delivery Date, (y) an amount equal to the Daily Failure Amount and (z) the number of Trading Days actually lapsed after such fifth (5th) Trading Day after the Share Delivery Date during which such certificates have not been delivered, or, in the case of a DWAC Delivery, such shares have not been electronically delivered; provided, however, the Holder shall only receive up to such amount of shares of Common Stock such that Holder and any other persons or entities whose beneficial ownership of Common Stock would be aggregated with the

Holder's for purposes of Section 13(d) of the Exchange Act (including shares held by any "group" of which the Holder is a member, but excluding shares beneficially owned by virtue of the ownership of securities or rights to acquire securities that have limitations on the right to convert, exercise or purchase similar to the limitation set forth herein) shall not collectively beneficially own greater than 9.98% of the total number of shares of Common Stock of the Corporation then issued and outstanding. Nothing herein shall limit a Holder's right to pursue actual damages for the Corporation's failure to deliver Conversion Shares within the period specified herein and such Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief; provided that Holder shall not receive duplicate damages for the Corporation's failure to deliver Conversion Shares within the period specified herein. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

iii. Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Conversion. If the Corporation fails to deliver to a Holder the applicable certificate or certificates or to effect a DWAC Delivery, as applicable, by the Share Delivery Date pursuant to Section 6(d)(i) (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount by which (x) such Holder's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Series A Preferred Stock equal to the number of shares of Series A Preferred Stock submitted for conversion or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted conversion of shares of Series A Preferred Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder $1,000. The Holder shall provide the Corporation written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such Holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Corporation. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Series A Preferred Stock as required pursuant to the terms hereof; provided, however, that the Holder shall not be entitled to both (i) require the reissuance of the shares of Series A Preferred Stock submitted for conversion for which such conversion was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i).

iv. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Series A Preferred Stock, free from

preemptive rights or any other actual contingent purchase rights of Persons other than the Holders of the Series A Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Series A Preferred Stock. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable.

v. Fractional Shares. No fractional shares or scrip representing fractional shares of Common Stock shall be issued upon the conversion of the Series A Preferred Stock. As to any fraction of a share which a Holder would otherwise be entitled to receive upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

vi. Transfer Taxes. The issuance of certificates for shares of the Common Stock upon conversion of the Series A Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the registered Holder(s) of such shares of Series A Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

e) Status as Stockholder. Upon each Conversion Date, (i) the shares of Series A Preferred Stock being converted shall be deemed converted into shares of Common Stock and (ii) the Holder's rights as a holder of such converted shares of Series A Preferred Stock shall cease and terminate, excepting only the right to receive certificates for such shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the holder shall retain all of its rights and remedies for the Corporation's failure to convert Series A Preferred Stock.

Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Series A Preferred Stock is outstanding: (A) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of this Series A Preferred Stock) with respect to the then outstanding shares of Common Stock; (B) subdivides outstanding shares of Common Stock into a larger number of shares; or (C) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

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b) Fundamental Transaction. If, at any time while this Series A Preferred Stock is outstanding, (A) the Corporation effects any merger or consolidation of the Corporation with or into another Person (other than a merger in which the Corporation is the surviving or continuing entity and its Common Stock is not exchanged for or converted into other securities, cash or property), (B) the Corporation effects any sale of all or substantially all of its assets in one transaction or a series of related transactions, (C) any tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which all of the Common Stock is exchanged for or converted into other securities, cash or property, or (D) the Corporation effects any reclassification of the Common Stock or any compulsory share exchange pursuant (other than as a result of a dividend, subdivision or combination covered by Section 7(a) above) to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, a "**Fundamental Transaction**"), then, upon any subsequent conversion of this Series A Preferred Stock the Holders shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction, the same kind and amount of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of one share of Common Stock (the "**Alternate Consideration**"). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holders shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Series A Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7(b) and insuring that this Series A Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. The Corporation shall cause to be delivered to each Holder, at its last address as it shall appear upon the stock books of the Corporation, written notice of any Fundamental Transaction at least 20 calendar days prior to the date on which such Fundamental Transaction is expected to become effective or close.

c) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

d) Notice to the Holders.

i. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Ratio after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Other Notices. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall

authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, of any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Series A Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 280 East Grand Avenue, South San Francisco, California 94080, facsimile number (650) 624-3010, or such other facsimile number or address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the principal place of business of such Holder. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the date immediately following the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section between 5:30 p.m. and 11:59 p.m. (New York City time) on any date, (iii) the second Business Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) [Reserved.]

c) Lost or Mutilated Series A Preferred Stock Certificate. If a Holder's Series A Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series A Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership thereof, reasonably satisfactory to the Corporation and, in each case, customary and reasonable indemnity, if requested. Applicants for a new certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Corporation may prescribe.

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d) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the holders of Series A Preferred Stock granted hereunder may be waived as to all shares of Series A Preferred Stock (and the Holders thereof) upon the written consent of the Holders of not less than a majority of the shares of Series A Preferred Stock then outstanding, unless a higher percentage is required by the DGCL, in which case the written consent of the holders of not less than such higher percentage shall be required.

e) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

f) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

g) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

h) Status of Converted Series A Preferred Stock. If any shares of Series A Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series A Preferred Stock.

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IN WITNESS WHEREOF, the undersigned has executed this Certificate of Designation this 18th day of April 2011.

/s/ Sharon A. Barbari

Name: Sharon A. Barbari
Title: Exec. Vice President, Finance & CFO

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ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF SERIES A PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Series A Convertible Preferred Stock indicated below, represented by stock certificate No(s). (the "Preferred Stock Certificates"), into shares of common stock, par value $0.001 per share (the "Common Stock"), of Cytokinetics, Incorporated, a Delaware corporation (the "Corporation"), as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock (the "Certificate of Designation") filed by the Corporation on April , 2011.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member), including the number of shares of Common Stock issuable upon conversion of the Series A Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series A Preferred Stock beneficially owned by such Holder or any of its Affiliates, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Affiliates that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6(c) of the Certificate of Designation, is . For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

Conversion calculations:

Date to Effect Conversion:

Number of shares of Series A Preferred Stock owned prior to Conversion:

Number of shares of Series A Preferred Stock to be Converted:

Number of shares of Common Stock to be Issued:

Address for delivery of physical certificates:
or
for DWAC Delivery:
DWAC Instructions:
Broker no:
Account no:

[HOLDER]

By: _____
Name:
Title:
Date:

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CERTIFICATE OF AMENDMENT OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF
CYTOKINETICS, INCORPORATED

CYTOKINETICS, INCORPORATED, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***Corporation***"), hereby certifies that:

1. The original name of the Corporation is **CYTOKINETICS, INCORPORATED**.

2. The date on which the Certificate of Incorporation of the Corporation was originally filed with the Secretary of State of the State of Delaware was August 5, 1997.

3. The Board of Directors of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the General Corporation Law of the State of Delaware, adopted resolutions amending the Amended and Restated Certificate of Incorporation of the Corporation to increase the number of authorized shares of Common Stock to 245,000,000. Specifically, the first sentence of Article IV is hereby amended by deleting "170,000,000 shares of Common Stock" and replacing the same with "245,000,000 shares of Common Stock".

4. This Certificate of Amendment was duly adopted by the stockholders of the Corporation in accordance with the provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.

[Signature Page Follows]

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IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its President and Chief Executive Officer this 28 day of July, 2011.

CYTOKINETICS, INCORPORATED

By: /s/ Robert I. Blum
ROBERT I. BLUM
President and Chief Executive Officer

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CYTOKINETICS, INCORPORATED

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

CYTOKINETICS, INCORPORATED, a Delaware corporation (the "**Corporation**"), in accordance with the provisions of Section 103 of the Delaware General Corporation Law (the "DGCL") does hereby certify that, in accordance with Sections 141(c) and 151 of the DGCL, the following resolution was duly adopted by the Board of Directors of the Corporation as of June 18, 2012:

RESOLVED, that the Board of Directors of the Corporation pursuant to authority expressly vesting in it by the provisions of the Certificate of Incorporation of the Corporation, hereby authorizes the issuance of a series of Preferred Stock designated as the Series B Convertible Preferred Stock, par value $0.001 per share, of the Corporation and hereby fixes the designation, number of shares, powers, preferences, rights, qualifications, limitations and restrictions thereof (in addition to any provisions set forth in the Certificate of Incorporation of the Corporation which are applicable to the Preferred Stock of all classes and series) as follows:

SERIES B CONVERTIBLE PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"**Affiliate**" means any person or entity that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a person or entity, as such terms are used in and construed under Rule 144 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

"**Alternate Consideration**" shall have the meaning set forth in Section 7(b).

"**Beneficial Ownership Limitation**" shall have the meaning set forth in Section 6(c).

"**Business Day**" means any day except Saturday, Sunday, any day which shall be a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"**Buy-In**" shall have the meaning set forth in Section 6(d)(iii).

"**Closing Sale Price**" means, for any security as of any date, the last closing trade price for such security prior to 4:00 p.m., New York City time, on the principal securities exchange or trading market where such security is listed or traded, as reported by Bloomberg, L.P. (or an equivalent, reliable reporting service mutually acceptable to and hereafter designated by Holders of a majority of the then-outstanding Series B Preferred Stock and the Corporation), or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, L.P., or, if no last trade price is reported for such security by Bloomberg, L.P., the average of the bid prices

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of any market makers for such security as reported on the OTC Pink Market by OTC Markets Group, Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined in good faith by the Board of Directors of the Corporation.

"**Commission**" means the Securities and Exchange Commission.

"**Common Stock**" means the Corporation's common stock, par value $0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed into.

"**Common Stock Equivalents**" means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"**Conversion Date**" shall have the meaning set forth in Section 6(a).

"**Conversion Price**" shall mean $0.76, as adjusted pursuant to paragraph 7 hereof.

"**Conversion Ratio**" shall have the meaning set forth in Section 6(b).

"**Conversion Shares**" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series B Preferred Stock in accordance with the terms hereof.

"**Daily Failure Amount**" means the product of (x) .005 multiplied by (y) the Closing Sale Price of the Common Stock on the applicable Share Delivery Date.

"**DGCL**" shall mean the Delaware General Corporation Law.

"**Distributions**" shall have the meaning set forth in Section 5(a).

"**DWAC Delivery**" shall have the meaning set forth in Section 6(a).

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"**Fundamental Transaction**" shall have the meaning set forth in Section 7(b).

"**Holder**" means any holder of Series B Preferred Stock.

"**Issuance Date**" means the date of the "Closing" as defined in that certain Underwriting Agreement related to the Series B Preferred Stock, dated June 20, 2012, by and among the Corporation and Cowen and Company, LLC as representative of the several underwriters named therein.

"**Junior Securities**" shall have the meaning set forth in Section 5(a).

"**Notice of Conversion**" shall have the meaning set forth in Section 6(a).

"**Parity Securities**" shall have the meaning set forth in Section 5(a).

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"**Person**" means any individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"**Senior Securities**" shall have the meaning set forth in Section 5(a).

"**Series B Preferred Stock Register**" shall have the meaning set forth in Section 2(b).

"**Share Delivery Date**" shall have the meaning set forth in Section 6(d).

"**Stated Value**" shall mean $760.00.

"**Trading Day**" means a day on which the Common Sock is traded for any period on the principal securities exchange or if the Common Stock is not traded on a principal securities exchange, on a day that the Common Stock is traded on another securities market on which the Common Stock is then being traded.

Section 2. Designation, Amount and Par Value; Assignment.

a) The series of preferred stock designated by this Certificate shall be designated as the Corporation's Series B Convertible Preferred Stock (the "**Series B Preferred Stock**") and the number of shares so designated shall be 23,026 (which shall not be subject to increase without the written consent of the Holders of a majority of the issued and outstanding Series B Preferred Stock). Each share of Series B Preferred Stock shall have a par value of $0.001 per share.

b) The Corporation shall register shares of the Series B Preferred Stock, upon records to be maintained by the Corporation for that purpose (the "**Series B Preferred Stock Register**"), in the name of the Holders thereof from time to time. The Corporation may deem and treat the registered Holder of shares of Series B Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. The Corporation shall register the transfer of any shares of Series B Preferred Stock in the Series B Preferred Stock Register, upon surrender of the certificates evidencing such shares to be transferred, duly endorsed by the Holder thereof, to the Corporation at its address specified herein. Upon any such registration or transfer, a new certificate evidencing the shares of Series B Preferred Stock so transferred shall be issued to the transferee and a new certificate evidencing the remaining portion of the shares not so transferred, if any, shall be issued to the transferring Holder, in each case, within three Business Days. The provisions of this Certificate are intended to be for the benefit of all Holders from time to time and shall be enforceable by any such Holder.

Section 3. Dividends. Holders shall not be entitled to receive any dividends in respect of the Series B Preferred Stock, unless and until specifically declared by the Board of Directors of the Corporation to be payable to the Holders of the Series B Preferred Stock.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the DGCL, the Series B Preferred Stock shall have no voting rights. However, as long as any shares of Series B Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock or alter or amend this Certificate, (b) increase the number of authorized shares of Series B Preferred Stock, or (c) enter into any agreement with respect to any of the foregoing.

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Section 5. Rank; Liquidation.

a) The Series B Preferred Stock shall rank (i) senior to all of the Common Stock; (ii) senior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms junior to any Series B Preferred Stock ("**Junior Securities**"); (iii) on parity with Series A Convertible Preferred Stock, par value $0.001 per share, and any other class or series of capital stock of the Corporation hereafter created specifically ranking by its terms on parity with the Series B Preferred Stock ("**Parity Securities**"); and (iv) junior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms senior to any Series B Preferred Stock ("**Senior Securities**"), in each case, as to distributions of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntarily or involuntarily (all such distributions being referred to collectively as "**Distributions**").

b) Subject to the prior and superior rights of the holders of any Senior Securities of the Corporation, upon liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, each holder of shares of Series B Preferred Stock shall be entitled to receive, in preference to any distributions of any of the assets or surplus funds of the Corporation to the holders of the Common Stock and Junior Securities and pari passu with any distribution to the holders of Parity Securities, an amount equal to $0.001 per share of Series B Preferred Stock, plus an additional amount equal to any dividends declared but unpaid on such shares, before any payments shall be made or any assets distributed to holders of any class of Common Stock or Junior Securities. If, upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation shall be insufficient to pay the holders of shares of the Series B Preferred Stock the amount required under the preceding sentence, then all remaining assets of the Corporation shall be distributed ratably to holders of the shares of the Series B Preferred Stock and Parity Securities.

Section 6. Conversion.

f) Conversions at Option of Holder. Each share of Series B Preferred Stock shall be convertible, at any time and from time to time from and after the Issuance Date, at the option of the Holder thereof, into a number of shares of Common Stock equal to the Conversion Ratio. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as **Annex A** (a "**Notice of Conversion**"), duly completed and executed. Other than a conversion following a Fundamental Transaction or following a notice provided for under Section 7(d)(ii) hereof, the Notice of Conversion must specify at least a number of shares of Series B Preferred Stock to be converted equal to the lesser of (x) 100 shares (such number subject to appropriate adjustment following the occurrence of an event specified in Section 7(a) hereof) and (y) the number of shares of Series B Preferred Stock then held by the Holder. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer program, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "**DWAC Delivery**"). The "**Conversion Date**", or the date on which a conversion shall be deemed effective, shall be defined as the Trading Day that the Notice of Conversion, completed and executed, is sent by facsimile to, and received during regular business hours by, the Corporation; provided that the original certificate(s) representing such shares of Series B Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original shares of Series B Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

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g) Conversion Ratio. The "Conversion Ratio" for each share of Series B Preferred Stock shall be equal to the Stated Value divided by the Conversion Price.

h) Beneficial Ownership Limitation. Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of the Series B Preferred Stock, and a Holder shall not have the right to convert any portion of the Series B Preferred Stock, to the extent that, after giving effect to an attempted conversion set forth on an applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member) would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Series B Preferred Stock subject to the Notice of Conversion with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series B Preferred Stock beneficially owned by such Holder or any of its Affiliates, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Affiliates that are subject to a limitation on conversion or exercise similar to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this Section 6(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission. For purposes of this Section 6(c), it is understood that the number of shares of Common Stock beneficially owned by each Investor shall be aggregated with each other Investor for purposes of Section 13(d) of the Exchange Act. For purposes of this Section 6(c), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (A) the Corporation's most recent periodic or annual filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation that is filed with the Commission or (C) a more recent notice by the Corporation or the Corporation's transfer agent to the Holder setting forth the number of shares of Common Stock then outstanding. Upon the written request of a Holder (which may be by email), the Corporation shall, within three (3) Trading Days thereof, confirm in writing to such Holder (which may be via email) the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of securities of the Corporation, including shares of Series B Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was last publicly reported or confirmed to the Holder. The "**Beneficial Ownership Limitation**" shall be 9.98% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion (to the extent permitted pursuant to this Section 6(c)). The Corporation shall be entitled to rely on representations made to it by the Holder in any Notice of Conversion regarding its Beneficial Ownership Limitation.

i) Mechanics of Conversion

vii. Delivery of Certificate or Electronic Issuance Upon Conversion. Not later than three Trading Days after the applicable Conversion Date, or if the Holder requests the issuance of

physical certificate(s), two Trading Days after receipt by the Corporation of the original certificate(s) representing such shares of Series B Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "**Share Delivery Date**"), the Corporation shall (a) deliver, or cause to be delivered, to the converting Holder a physical certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Series B Preferred Stock or (b) in the case of a DWAC Delivery, electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system. If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Conversion Notice by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Series B Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Series B Preferred Stock unsuccessfully tendered for conversion to the Corporation.

viii. Obligation Absolute. Subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Series B Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. Subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, in the event a Holder shall elect to convert any or all of its Series B Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or any one associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Series B Preferred Stock of such Holder shall have been sought and obtained by the Corporation, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the value of the Conversion Shares into which would be converted the Series B Preferred Stock which is subject to such injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall, subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, issue Conversion Shares upon a properly noticed conversion. If the Corporation fails to deliver to a Holder such certificate or certificates, or electronically deliver (or cause its transfer agent to electronically deliver) such shares in the case of a DWAC Delivery, pursuant to Section 6(d)(i) on or prior to the fifth (5th) Trading Day after the Share Delivery Date applicable to such conversion (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), then, unless the Holder has rescinded the applicable Conversion Notice pursuant to Section 6(d)(i) above, the Corporation shall pay (as liquidated damages and not as a penalty) to such Holder an amount

payable, at the Corporation's option, either (a) in cash or (b) in shares of Common Stock that are valued for these purposes at the Closing Sale Price on the date of such calculation, in each case equal to the product of (x) the number of Conversion Shares required to have been issued by the Corporation on such Share Delivery Date, (y) an amount equal to the Daily Failure Amount and (z) the number of Trading Days actually lapsed after such fifth (5th) Trading Day after the Share Delivery Date during which such certificates have not been delivered, or, in the case of a DWAC Delivery, such shares have not been electronically delivered; provided, however, the Holder shall only receive up to such amount of shares of Common Stock such that Holder and any other persons or entities whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act (including shares held by any "group" of which the Holder is a member, but excluding shares beneficially owned by virtue of the ownership of securities or rights to acquire securities that have limitations on the right to convert, exercise or purchase similar to the limitation set forth herein) shall not collectively beneficially own greater than 9.98% of the total number of shares of Common Stock of the Corporation then issued and outstanding. Nothing herein shall limit a Holder's right to pursue actual damages for the Corporation's failure to deliver Conversion Shares within the period specified herein and such Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief; provided that Holder shall not receive duplicate damages for the Corporation's failure to deliver Conversion Shares within the period specified herein. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

ix. Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Conversion. If the Corporation fails to deliver to a Holder the applicable certificate or certificates or to effect a DWAC Delivery, as applicable, by the Share Delivery Date pursuant to Section 6(d)(i) (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount by which (x) such Holder's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Series B Preferred Stock equal to the number of shares of Series B Preferred Stock submitted for conversion or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted conversion of shares of Series B Preferred Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder $1,000. The Holder shall provide the Corporation written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such Holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Corporation. Nothing herein shall limit a Holder's right to pursue any other

remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Series B Preferred Stock as required pursuant to the terms hereof; provided, however, that the Holder shall not be entitled to both (i) require the reissuance of the shares of Series B Preferred Stock submitted for conversion for which such conversion was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i).

x. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Series B Preferred Stock, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holders of the Series B Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Series B Preferred Stock. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable.

xi. Fractional Shares. No fractional shares or scrip representing fractional shares of Common Stock shall be issued upon the conversion of the Series B Preferred Stock. As to any fraction of a share which a Holder would otherwise be entitled to receive upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

xii. Transfer Taxes. The issuance of certificates for shares of the Common Stock upon conversion of the Series B Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the registered Holder(s) of such shares of Series B Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

j) Status as Stockholder. Upon each Conversion Date, (i) the shares of Series B Preferred Stock being converted shall be deemed converted into shares of Common Stock and (ii) the Holder's rights as a holder of such converted shares of Series B Preferred Stock shall cease and terminate, excepting only the right to receive certificates for such shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the holder shall retain all of its rights and remedies for the Corporation's failure to convert Series B Preferred Stock.

Section 7. Certain Adjustments.

e) Stock Dividends and Stock Splits. If the Corporation, at any time while this Series B Preferred Stock is outstanding: (A) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of this Series B Preferred Stock) with respect to

the then outstanding shares of Common Stock; (B) subdivides outstanding shares of Common Stock into a larger number of shares; or (C) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

f) Fundamental Transaction. If, at any time while this Series B Preferred Stock is outstanding, (A) the Corporation effects any merger or consolidation of the Corporation with or into another Person (other than a merger in which the Corporation is the surviving or continuing entity and its Common Stock is not exchanged for or converted into other securities, cash or property), (B) the Corporation effects any sale of all or substantially all of its assets in one transaction or a series of related transactions, (C) any tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which all of the Common Stock is exchanged for or converted into other securities, cash or property, or (D) the Corporation effects any reclassification of the Common Stock or any compulsory share exchange pursuant (other than as a result of a dividend, subdivision or combination covered by Section 7(a) above) to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, a "**Fundamental Transaction**"), then, upon any subsequent conversion of this Series B Preferred Stock the Holders shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction, the same kind and amount of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of one share of Common Stock (the "**Alternate Consideration**"). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holders shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Series B Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7(b) and insuring that this Series B Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. The Corporation shall cause to be delivered to each Holder, at its last address as it shall appear upon the stock books of the Corporation, written notice of any Fundamental Transaction at least 20 calendar days prior to the date on which such Fundamental Transaction is expected to become effective or close.

g) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

[ ] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

h) Notice to the Holders.

iii. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Ratio after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

iv. Other Notices. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, of any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Series B Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

Section 8. Miscellaneous.

i) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 280 East Grand Avenue, South San Francisco, California 94080, facsimile number (650) 624-3010, or such other facsimile number or address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the principal place of business of such Holder. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 5:30 p.m. (New York City

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time) on any date, (ii) the date immediately following the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section between 5:30 p.m. and 11:59 p.m. (New York City time) on any date, (iii) the second Business Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

j) [Reserved.]

k) Lost or Mutilated Series B Preferred Stock Certificate. If a Holder's Series B Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series B Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership thereof, reasonably satisfactory to the Corporation and, in each case, customary and reasonable indemnity, if requested. Applicants for a new certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Corporation may prescribe.

l) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the holders of Series B Preferred Stock granted hereunder may be waived as to all shares of Series B Preferred Stock (and the Holders thereof) upon the written consent of the Holders of not less than a majority of the shares of Series B Preferred Stock then outstanding, unless a higher percentage is required by the DGCL, in which case the written consent of the holders of not less than such higher percentage shall be required.

m) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

n) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

o) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

p) Status of Converted Series B Preferred Stock. If any shares of Series B Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B Preferred Stock.

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IN WITNESS WHEREOF, the undersigned has executed this Certificate of Designation this 21st day of June 2012.

/s/ Robert I. Blum

Name: Robert I. Blum
Title: Chief Executive Officer

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ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF SERIES B PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Series B Convertible Preferred Stock indicated below, represented by stock certificate No(s). (the "Preferred Stock Certificates"), into shares of common stock, par value $0.001 per share (the "Common Stock"), of Cytokinetics, Incorporated, a Delaware corporation (the "Corporation"), as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (the "Certificate of Designation") filed by the Corporation on June 21, 2012.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member), including the number of shares of Common Stock issuable upon conversion of the Series B Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series B Preferred Stock beneficially owned by such Holder or any of its Affiliates, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Affiliates that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6(c) of the Certificate of Designation, is . For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

Conversion calculations:

Date to Effect Conversion:

Number of shares of Series B Preferred Stock owned prior to Conversion:

Number of shares of Series B Preferred Stock to be Converted:

Number of shares of Common Stock to be Issued:

Address for delivery of physical certificates:
or
for DWAC Delivery:

DWAC Instructions:
Broker no:
Account no:

[HOLDER]

By: _____
Name:
Title:
Date:

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CERTIFICATE OF AMENDMENT OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
CYTOKINETICS, INCORPORATED

CYTOKINETICS, INCORPORATED, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***Corporation***"), hereby certifies that:

FIRST: The name of the Corporation is **CYTOKINETICS, INCORPORATED**.

SECOND: The date on which the Certificate of Incorporation of the Corporation was originally filed with the Secretary of State of the State of Delaware is August 5, 1997.

THIRD: The Board of Directors of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the General Corporation Law of the State of Delaware, adopted resolutions to amend Article IV of the Corporation's Amended and Restated Certificate of Incorporation to read in its entirety as follows:

"The corporation shall have authority to issue shares as follows:

81,500,000 shares of Common Stock, par value $0.001 per share. Each share of Common Stock shall entitle the holder thereof to one (1) vote on each matter submitted to a vote at a meeting of stockholders.

10,000,000 shares of Preferred Stock, par value $0.001 per share, which may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board of Directors). The Board of Directors is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of Preferred Stock, including without limitation authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing.

The Board of Directors is further authorized to increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any series, the number of which was fixed by it, subsequent to the issuance of shares of such series then outstanding, subject to the powers, preferences and rights, and the qualifications, limitations and restrictions thereof stated in the Certificate of Incorporation or the resolution of the Board of Directors originally fixing the number of shares of such series. If the number of shares of any series is so decreased, then the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

Effective as of 5:00 p.m., Eastern time, on the date this Certificate of Amendment of Amended and Restated Certificate of Incorporation is filed with the Secretary of State of the State of Delaware, each six (6) shares of Common Stock, par value $0.001 per share, issued and outstanding shall, automatically and without any action on the part of the respective holders thereof, be combined and converted into one (1) share of Common Stock, par value $.001 per share; provided, however, that the Corporation shall issue no fractional shares as a result of the actions set forth herein but shall instead pay to the holder of such fractional share a sum in cash equal to such fraction multiplied by the closing sales price of the Common Stock as reported on the Nasdaq Capital Market on the last business day before the date this Certificate of Amendment of Amended and Restated Certificate of Incorporation is filed with the Secretary of State of the State of Delaware."

FOURTH: This Certificate of Amendment was duly adopted by the stockholders of the Corporation in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

[ ] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its Chief Executive Officer this 24th day of June, 2013.

CYTOKINETICS, INCORPORATED

By: /s/ Robert I. Blum

Robert I. Blum, President & Chief Executive Officer

[ ] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

EXHIBIT B

Bylaws

[see attached]

[ ] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

AMENDED AND RESTATED BYLAWS OF

CYTOKINETICS, INCORPORATED

(as amended on January 21, 2004 effective as of the
closing of the corporation's initial public offering)

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AMENDED AND RESTATED BYLAWS OF
CYTOKINETICS, INCORPORATED

ARTICLE 1

CORPORATE OFFICES

1.1 Registered Office. The registered office of Cytokinetics, Incorporated shall be fixed in the corporation's certificate of incorporation, as the same may be amended from time to time.

1.2 Other Offices. The corporation's Board of directors (the "***Board***") may at any time establish other offices at any place or places where the corporation is qualified to do business.

ARTICLE 2

MEETINGS OF STOCKHOLDERS

2.1 Place of Meetings. Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the Board. The Board may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the Delaware General Corporation Law (the "***DGCL***"). In the absence of any such designation or determination, stockholders' meetings shall be held at the corporation's principal executive office.

2.2 Annual Meeting. The annual meeting of stockholders shall be held each year. The Board shall designate the date and time of the annual meeting. In the absence of such designation the annual meeting of stockholders shall be held on the second Tuesday of May of each year at 10:00 a.m. However, if such day falls on a legal holiday, then the meeting shall be held at the same time and place on the next succeeding business day. At the annual meeting, directors shall be elected and any other proper business may be transacted.

2.3 Special Meeting. A special meeting of the stockholders may be called at any time by the Board, chairperson of the Board, chief executive officer or president (in the absence of a chief executive officer), but such special meetings may not be called by any other person or persons.

No business may be transacted at such special meeting other than the business specified in such notice to stockholders. Nothing contained in this paragraph of this Section 2.3 shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board may be held.

2.4 Advance Notice Procedures; Notice of Stockholders' Meetings.

(a) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be: (A) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the board of directors, (B) otherwise properly brought before the meeting by or at the direction of the board of directors, or (C) otherwise properly brought before the meeting by a stockholder. For business to be properly brought before an annual meeting by a stockholder, the stockholder must have given timely notice thereof in writing to the secretary of the corporation. To be timely, a stockholder's notice must be delivered to or mailed and received at the principal executive offices of the corporation not less than one hundred twenty (120) calendar days before the one year anniversary of the date on which the corporation first mailed its proxy statement to stockholders in connection with the previous year's annual meeting of stockholders; provided, however, that in the event that no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than thirty (30) days from the date of the prior year's meeting, notice by the stockholder to be timely must be so received not later than the close of business on the later of one hundred twenty (120) calendar days in advance of such annual meeting and ten (10) calendar days following the date on which public announcement of the date of the meeting is first made. A

stockholder's notice to the secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting: (a) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (b) the name and address, as they appear on the corporation's books, of the stockholder proposing such business, (c) the class and number of shares of the corporation that are beneficially owned by the stockholder, (d) any material interest of the stockholder in such business, and (e) any other information that is required to be provided by the stockholder pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "1934 Act"), in his capacity as a proponent to a stockholder proposal. Notwithstanding the foregoing, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholder's meeting, stockholders must provide notice as required by the regulations promulgated under the 1934 Act. Notwithstanding anything in these bylaws to the contrary, no business shall be conducted at any annual meeting except in accordance with the procedures set forth in this paragraph (i). The chairman of the annual meeting shall, if the facts warrant, determine and declare at the meeting that business was not properly brought before the meeting and in accordance with the provisions of this paragraph (i), and, if he should so determine, he shall so declare at the meeting that any such business not properly brought before the meeting shall not be transacted.

(b) Only persons who are nominated in accordance with the procedures set forth in this paragraph (ii) shall be eligible for election as directors. Nominations of persons for election to the board of directors of the corporation may be made at a meeting of stockholders by or at the direction of the board of directors or by any stockholder of the corporation entitled to vote in the election of directors at the meeting who complies with the notice procedures set forth in this paragraph (ii). Such nominations, other than those made by or at the direction of the board of directors, shall be made pursuant to timely notice in writing to the secretary of the corporation in accordance with the provisions of paragraph (i) of this Section 2.4. Such stockholder's notice shall set forth (a) as to each person, if any, whom the stockholder proposes to nominate for election or re-election as a director: (A) the name, age, business address and residence address of such person, (B) the principal occupation or employment of such person, (C) the class and number of shares of the corporation that are beneficially owned by such person, (D) a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder, and (E) any other information relating to such person that is required to be disclosed in solicitations of proxies for elections of directors, or is otherwise required, in each case pursuant to Regulation 14A under the 1934 Act (including without limitation such person's written consent to being named in the proxy statement, if any, as a nominee and to serving as a director if elected); and (b) as to such stockholder giving notice, the information required to be provided pursuant to paragraph (i) of this Section 2.4. At the request of the board of directors, any person nominated by a stockholder for election as a director shall furnish to the secretary of the corporation that information required to be set forth in the stockholder's notice of nomination which pertains to the nominee. No person shall be eligible for election as a director of the corporation unless nominated in accordance with the procedures set forth in this paragraph (ii). The chairman of the meeting shall, if the facts warrant, determine and declare at the meeting that a nomination was not made in accordance with the procedures prescribed by these bylaws, and if he should so determine, he shall so declare at the meeting, and the defective nomination shall be disregarded.

These provisions shall not prevent the consideration and approval or disapproval at an annual meeting of reports of officers, directors and committees of the board of directors, but in connection therewith no new business shall be acted upon at any such meeting unless stated, filed and received as herein provided. Notwithstanding anything in these bylaws to the contrary, no business brought before a meeting by a stockholder shall be conducted at an annual meeting except in accordance with procedures set forth in this Section 2.4.

All notices of meetings of stockholders shall be sent or otherwise given in accordance with either Section 2.5 or Section 8.1 of these bylaws not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place, if any, date and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

2.5 Manner of Giving Notice; Affidavit of Notice. Notice of any meeting of stockholders shall be given:

(a) if mailed, when deposited in the United States mail, postage prepaid, directed to the stockholder at his or her address as it appears on the corporation's records; or

(b) if electronically transmitted as provided in Section 8.1 of these bylaws.

An affidavit of the secretary or an assistant secretary of the corporation or of the transfer agent or any other agent of the corporation that the notice has been given by mail or by a form of electronic transmission, as applicable, shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

2.6 Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairperson of the meeting, or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.7 Adjourned Meeting; Notice. When a meeting is adjourned to another time or place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place if any thereof, 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 such adjourned meeting 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 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.

2.8 Conduct of Business. The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of business.

2.9 Voting. The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation or these bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

2.10 Stockholder Action by Written Consent Without a Meeting. Subject to the rights of the holders of the shares of any series of Preferred Stock or any other class of stock or series thereof having a preference over the Common Stock as dividend or upon liquidation, any action required or permitted to be taken by the stockholders of the corporation must be effected at a duly called annual or special meeting of stockholders of the corporation and may not be effected by any consent in writing by such stockholders.

2.11 Record Date for Stockholder Notice; Voting; Giving Consents. 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, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or 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 may fix, in advance, a record date, which record date shall not precede the date on which the resolution fixing the record date is adopted and which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other such action.

If the Board does not so fix a record date:

(a) 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.

(b) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

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 may fix a new record date for the adjourned meeting.

2.12 Proxies. Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL.

2.13 List of Stockholders Entitled To Vote. The officer who has charge of the stock ledger of the corporation shall prepare and make, at least 10 days before every meeting of 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. The corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least 10 days prior to the meeting: (i) 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 (ii) during ordinary business hours, at the corporation's principal executive office. 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. If the meeting is to be held at a place, then the list shall 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. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Such list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

2.14 Inspectors of Election. A written proxy may be in the form of a telegram, cablegram, or other means of electronic transmission which sets forth or is submitted with information from which it can be determined that the telegram, cablegram, or other means of electronic transmission was authorized by the person.

Before any meeting of stockholders, the board of directors shall appoint an inspector or inspectors of election to act at the meeting or its adjournment. The number of inspectors shall be either one (1) or three (3). If any person appointed as inspector fails to appear or fails or refuses to act, then the chairperson of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy.

Such inspectors shall:

(a) determine the number of shares outstanding and the voting power of each, the number of shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies;

(b) receive votes, ballots or consents;

(c) hear and determine all challenges and questions in any way arising in connection with the right to vote;

(d) count and tabulate all votes or consents;

(e) determine when the polls shall close;

(f) determine the result; and

(g) do any other acts that may be proper to conduct the election or vote with fairness to all stockholders.

The inspectors of election shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical. If there are three (3) inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein.

ARTICLE 3

DIRECTORS

3.1 Powers. Subject to the provisions of the DGCL and any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board.

3.2 Number of Directors. The authorized number of directors shall be determined from time to time by resolution of the Board, provided the Board shall consist of at least one member. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 Election, Qualification and Term of Office of Directors. Except as provided in Section 3.4 of these bylaws, each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation or removal. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors.

If so provided in the certificate of incorporation, the directors of the corporation shall be divided into three classes.

3.4 Resignation and Vacancies. Any director may resign at any time upon notice given in writing or by electronic transmission to the corporation. When one or more directors so resigns and the resignation is 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 as provided in this section in the filling of other vacancies.

Unless otherwise provided in the certificate of incorporation or these bylaws, vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director. If the directors are divided into classes, a person so elected by the directors then in office to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been chosen and until his or her successor shall have been duly elected and qualified.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole Board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

3.5 Place of Meetings; Meetings by Telephone. The Board may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the Board, or any committee designated by the Board, may participate in a meeting of the Board, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 Regular Meetings. Regular meetings of the Board may be held without notice at such time and at such place as shall from time to time be determined by the Board.

3.7 Special Meetings; Notice. Special meetings of the Board for any purpose or purposes may be called at any time by the chairperson of the Board, the chief executive officer, the president, the secretary or a majority of the authorized number of directors.

Notice of the time and place of special meetings shall be:

(a) delivered personally by hand, by courier or by telephone;

(b) sent by United States first-class mail, postage prepaid;

(c) sent by facsimile; or

(d) sent by electronic mail,

directed to each director at that director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the corporation's records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the corporation's principal executive office) nor the purpose of the meeting.

3.8 Quorum. At all meetings of the Board, a majority of the authorized number of directors shall constitute a quorum for the transaction of business. The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute, the certificate of incorporation or these bylaws. If a quorum is not present at any meeting of the Board, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

3.9 Board Action by Written Consent Without a 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, or of any committee thereof, may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board 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.

3.10 Fees and Compensation of Directors. Unless otherwise restricted by the certificate of incorporation or these bylaws, the Board shall have the authority to fix the compensation of directors.

3.11 Approval of Loans to Officers. 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 subsidiary, including any officer or employee who is a director of the corporation or its subsidiary, whenever, in the judgment of the Board, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board shall approve, including, without limitation, a pledge of shares of stock of the corporation.

3.12 Removal of Directors. Any director may be removed from office by the stockholders of the corporation only for cause.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

ARTICLE 4

COMMITTEES

4.1 Committees of Directors. The Board may, by resolution passed by a majority of the authorized number of directors, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board 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. In the absence or disqualification of a member of a committee, 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 member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board or in these bylaws, shall have and may exercise all the powers and authority of the Board 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 that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the corporation,

4.2 Committee Minutes. Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

4.3 Meetings and Action of Committees. Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(a) Section 3.5 (place of meetings and meetings by telephone);

(b) Section 3.6 (regular meetings);

(c) Section 3.7 (special meetings and notice);

(d) Section 3.8 (quorum);

(e) Section 7.12 (waiver of notice); and

(f) Section 3.9 (action without a meeting)

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the Board and its members. However:

(g) the time of regular meetings of committees may be determined either by resolution of the Board or by resolution of the committee;

(h) special meetings of committees may also be called by resolution of the Board; and

(i) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

ARTICLE 5

OFFICERS

5.1 Officers. The officers of the corporation shall be a president and a secretary. The corporation may also have, at the discretion of the Board, a chairperson of the Board, a vice chairperson of the Board, a chief executive officer, a chief financial officer or treasurer, one or more vice presidents, one or more assistant vice presidents, one or more assistant treasurers, one or more assistant secretaries, and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

5.2 Appointment of Officers. The Board shall appoint the officers of the corporation, except such officers as may be appointed in accordance with the provisions of Sections 5.3 and 5.5 of these bylaws, subject to the rights, if any, of an officer under any contract of employment.

5.3 Subordinate Officers. The Board may appoint, or empower the chief executive officer or, in the absence of a chief executive officer, the president, to appoint, such other officers and agents as the business of the corporation may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the Board may from time to time determine.

5.4 Removal and Resignation of Officers. Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the Board at any regular or special meeting of the Board or, except in the case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board.

Any officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 Vacancies in Offices. Any vacancy occurring in any office of the corporation shall be filled by the Board or as provided in Section 5.2.

5.6 Representation of Shares of Other Corporations. The chairperson of the Board, the president, any vice president, the treasurer, the secretary or assistant secretary of this corporation, or any other person authorized by the Board or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

5.7 Authority and Duties of Officers. All officers of the corporation shall respectively have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the Board or the stockholders and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board.

ARTICLE 6

RECORDS AND REPORTS

6.1 Maintenance and Inspection of Records. The corporation shall, either at its principal executive office or at such place or places as designated by the Board, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent so to act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal executive office.

6.2 Inspection by Directors. Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his or her position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court may summarily order the corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

ARTICLE 7

GENERAL MATTERS

7.1 Execution of Corporate Contracts and Instruments. The Board, except as otherwise provided in these bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board 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.

7.2 Stock Certificates; Partly Paid Shares. The shares of the corporation shall be represented by certificates, provided that the Board may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares.

Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Notwithstanding the adoption of such a resolution by the Board, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the corporation by the chairperson or vice-chairperson of the Board, or the president or vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of such corporation representing the number of shares registered in certificate form. Any or all of the signatures on the

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 has 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 he were such officer, transfer agent or registrar at the date of issue.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, upon the books and records of the corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

7.3 Special Designation on Certificates. If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

7.4 Lost Certificates. Except as provided in this Section 7.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

7.5 Construction; Definitions. Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

7.6 Dividends. The Board, subject to any restrictions contained in either (i) the DGCL, or (ii) the certificate of incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property, or in shares of the corporation's capital stock.

The Board may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the corporation, and meeting contingencies.

7.7 Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board and may be changed by the Board.

7.8 Seal. The corporation may adopt a corporate seal, which shall be adopted and which may be altered by the Board. The corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

7.9 Transfer of Stock. Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

7.10 Stock Transfer Agreements. 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.

7.11 Registered Stockholders. The corporation:

(a) 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;

(b) shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares; and

(c) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

7.12 Waiver of Notice. Whenever notice is required to be given under any provision of the DGCL, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person 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. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

ARTICLE 8

NOTICE BY ELECTRONIC TRANSMISSION

8.1 Notice by Electronic Transmission. Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the certificate of incorporation or these bylaws, any notice to stockholders given by the corporation under any provision of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any such consent shall be deemed revoked if:

(a) the corporation is unable to deliver by electronic transmission two consecutive notices given by the corporation in accordance with such consent; and

(b) such inability becomes known to the secretary or an assistant secretary of the corporation or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(c) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(d) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;

(e) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(f) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

8.2 Definition of Electronic Transmission. An "electronic transmission" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

8.3 Inapplicability. Notice by a form of electronic transmission shall not apply to Sections 164, 296, 311, 312 or 324 of the DGCL.

ARTICLE 9

INDEMNIFICATION

9.1 Indemnification of Directors and Officers. The corporation shall indemnify and hold harmless, to the fullest extent permitted by the DGCL as it presently exists or may hereafter be amended, any director or officer of the corporation 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 he or she, or a person for whom he or she is the legal representative, is or was a director, officer, employee or agent of the corporation or 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, trust, enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such Proceeding. The corporation shall be required to indemnify a person in connection with a Proceeding initiated by such person only if the Proceeding was authorized by the Board.

9.2 Indemnification of Others. The corporation shall have the power to indemnify and hold harmless, to the extent permitted by applicable law as it presently exists or may hereafter be amended, any employee or agent of the corporation who was or is made or is threatened to be made a party or is otherwise involved in any Proceeding by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was an employee or agent of the corporation or 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, trust, enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such Proceeding.

9.3 Prepayment of Expenses. The corporation shall pay the expenses incurred by any officer or director of the corporation, and may pay the expenses incurred by any employee or agent of the corporation, in defending any Proceeding in advance of its final disposition; provided, however, that the payment of expenses incurred by a person in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the person to repay all amounts advanced if it should be ultimately determined that the person is not entitled to be indemnified under this Article IX or otherwise.

9.4 Determination; Claim. If a claim for indemnification or payment of expenses under this Article IX is not paid in full within sixty days after a written claim therefor has been received by the corporation the claimant 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 claimant was not entitled to the requested indemnification or payment of expenses under applicable law.

9.5 Non-Exclusivity of Rights. The rights conferred on any person by this Article IX 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 bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

9.6 Insurance. The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was 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 him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify him or her against such liability under the provisions of the DGCL.

9.7 Other Indemnification. The corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or non-profit entity shall be reduced by any amount such person may collect as indemnification from such other corporation, partnership, joint venture, trust, enterprise or non-profit enterprise.

9.8 Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article IX 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."

ARTICLE 10

AMENDMENTS

These bylaws may be adopted, amended or repealed by the stockholders entitled to vote. However, the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

DEBTOR: **CYTOKINETICS, INCORPORATED**
SECURED PARTY: **OXFORD FINANCE LLC,**
as Collateral Agent

EXHIBIT A TO UCC FINANCING STATEMENT

Description of Collateral

The Collateral consists of all of Debtor's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any Foreign Subsidiary, if Borrower demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code; and (iii) any license, contract or interest of Borrower as a lessee under an Equipment lease, in each case if the granting of a Lien in such license, contract or interest is prohibited by or would constitute a default under the agreement governing such license, contract or interest (but (A) only to the extent such prohibition is enforceable under applicable law and (B) other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-408 or 9-409 (or any other Section) of Division 9 of the Code); provided that upon the termination, lapsing or expiration of any such prohibition, such license, contract or interest, as applicable, shall automatically be subject to the security interest granted in favor of Collateral Agent hereunder and become part of the "Collateral."

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Borrower has agreed not to encumber any of its Intellectual Property.

Capitalized terms used but not defined herein have the meanings ascribed in the Uniform Commercial Code in effect in the State of California as in effect from time to time (the "**Code**") or, if not defined in the Code, then in the Loan and Security Agreement by and between Debtor, Secured Party and the other Lenders party thereto (as modified, amended and/or restated from time to time).

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-192125) and Form S-8 (Nos. 333-115146, 333-125973, 333-133323, 333-136524, 333-140963, 333-149713, 333-152850, 333-161116, 333-168520, 333-176089, 333-183091, 333-190458 and 333-206101) of Cytokinetics, Incorporated of our report dated March 3, 2016 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
San Jose, CA
March 3, 2016

Exhibit 31.1

PRINCIPAL EXECUTIVE OFFICER CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Robert I. Blum, certify that:

1. I have reviewed this Annual Report on Form 10-K of Cytokinetics, Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Robert I. Blum
Robert I. Blum,
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: March 3, 2016

Exhibit 31.2

PRINCIPAL FINANCIAL OFFICER CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sharon A. Barbari, certify that:

1. I have reviewed this Annual Report on Form 10-K of Cytokinetics, Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Sharon A. Barbari
Sharon A. Barbari,
Executive Vice President, Finance and Chief
Financial Officer (Principal Financial Officer)

Date March 3, 2016

Exhibit 32.1

CEO and CFO CERTIFICATIONS PURSUANT TO
RULE 13a-14(b) AND SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. Section 1350)

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), Robert I. Blum, Chief Executive Officer of Cytokinetics, Incorporated (the "Company"), and Sharon A. Barbari, Chief Financial Officer of the Company, each hereby certifies that, to the best of his or her knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015, and to which this certification is attached as Exhibit 32.1 (the "Annual Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and

2. The information contained in this Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Robert I. Blum
Robert I. Blum,
President, Chief Executive Officer and Director
(Principal Executive Officer)

By: /s/ Sharon A. Barbari
Sharon A. Barbari,
Executive Vice President, Finance and Chief
Financial Officer (Principal Financial Officer)

Date: March 3, 2016

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Cytokinetics, Incorporated under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.