

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, 2014

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

(State or other jurisdiction of
incorporation or organization)

94-3291317

(I.R.S. Employer
Identification No.)

280 East Grand Avenue
South San Francisco, CA

(Address of principal executive offices)

94080

(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 \$174.5 million, computed by reference to the last sales price of \$4.78 as reported by the NASDAQ Market as of the last business day of the Registrant's most recently completed second fiscal quarter, June 30, 2014. 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 106,337 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 27, 2015 was 38,674,892 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for its 2015 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 to Part III of this Annual Report on Form 10-K.

[Table of Contents](#)

CYTOKINETICS, INCORPORATED
FORM 10-K
Year Ended December 31, 2014
INDEX

	<u>Page</u>
<u>PART I</u>	
Item 1. Business	3
Item 1A. Risk Factors	23
Item 1B. Unresolved Staff Comments	49
Item 2. Properties	49
Item 3. Legal Proceedings	49
Item 4. Mine Safety Disclosures	49
<u>PART II</u>	
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	50
Item 6. Selected Financial Data	52
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	54
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	79
Item 8. Financial Statements and Supplementary Data	80
Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure	119
Item 9A. Controls and Procedures	119
Item 9B. Other Information	119
<u>PART III</u>	
Item 10. Directors, Executive Officers and Corporate Governance	120
Item 11. Executive Compensation	120
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	120
Item 13. Certain Relationships and Related Transactions, and Director Independence	120
Item 14. Principal Accounting Fees and Services	120
<u>PART IV</u>	
Item 15. Exhibits and Financial Statement Schedules	121
Signatures	127

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 2015;
- 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 acceptance by regulatory authorities of the effects of tirasemtiv on respiratory function, including slow vital capacity, in patients with ALS as a Phase III 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 omeacamtiv mecarbil into Phase III 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;

Table of Contents

- 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;

[Table of Contents](#)

- 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 clinical 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. 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 have conducted a Phase II clinical trials program for tirasemtiv, including a Phase IIb 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 are planning to initiate a Phase III clinical development program for tirasemtiv in patients with ALS in 2015. 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 Phase I clinical trials of CK-2127107 and plans to initiate a Phase II clinical trial of CK-2127107 in patients with spinal muscular atrophy (SMA) in the second half of 2015. CK-2127107 is also being evaluated for potential use in other indications associated with muscle weakness. 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

[Table of Contents](#)

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.

A Phase II clinical trial of omecamtiv mecarbil, known as COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure), is ongoing. COSMIC-HF is 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 IIb 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 through 2015. 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 2015, 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 II	<ul style="list-style-type: none"> We anticipate initiating a Phase III clinical development program for tirasemtiv in patients with ALS in the second quarter of 2015. We anticipate continuing our interactions with regulatory authorities regarding the further development of tirasemtiv throughout 2015.
CK-2127107 (fast skeletal muscle troponin activator)	Partnered with Astellas	SMA	Phase I	<ul style="list-style-type: none"> We anticipate initiating a Phase II clinical trial in patients with SMA in the second half of 2015. Cytokinetics and Astellas continue to evaluate other indications which may be suitable for CK-2127107 or other skeletal sarcomere activators
Cardiac Muscle Contractility Program				
Omecamtiv mecarbil (cardiac muscle myosin activator)	Partnered with Amgen	heart failure (oral administration)	Phase II	<ul style="list-style-type: none"> We anticipate the enrollment of patients in the expansion phase of COSMIC-HF to conclude in the first quarter of 2015, and results from COSMIC-HF to be available in the second half of 2015.
Omecamtiv mecarbil (cardiac muscle myosin activator)	Partnered with Amgen	heart failure (IV administration)	Phase II	<ul style="list-style-type: none"> ATOMIC-HF completed in 2013.

[Table of Contents](#)

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. Our research and development activities since our inception in 1997 have produced multiple drug candidates that have progressed into clinical testing. Each of these 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

Our goal is to discover, develop and commercialize novel drug products that modulate muscle function in ways that may benefit patients with serious diseases or medical conditions, with the intent of establishing a fully integrated biopharmaceutical company. We intend to achieve this by:

- *Focusing on drug discovery and development activities relating to the biology of muscle function.* We intend to capitalize on the knowledge and expertise we have acquired in each of our muscle contractility research and development programs. In these programs, we are investigating potential treatments for diseases or medical conditions where impaired regulation of the contractile function of muscle plays a key role and such diseases or conditions may be amenable to treatment by modulation of muscle contractility, such as heart failure, and medical conditions associated with skeletal muscle weakness or wasting.
- *Leveraging our cytoskeletal expertise and proprietary technologies to increase the speed, efficiency and yield of our drug discovery and development processes.* We believe that our unique understanding of the cytoskeleton 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.
- *Focusing on comprehensive development programs that may enhance the success of our activities directed to potential registration.* We believe that by focusing on disease areas with 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. We believe that our investing in these activities may result in more successful later-stage clinical development activities that may increase the likelihood of our achieving our objectives to develop effective therapeutics that may address the needs of patients with grievous diseases and conditions.
- *Building development and commercialization capabilities directed at concentrated and growing markets.* We focus our drug discovery and development activities on disease areas for which there are serious unmet medical needs. In particular, 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

[Table of Contents](#)

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 with the goal of becoming a fully-integrated biopharmaceutical company.

- *Establishing 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.

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 muscle 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 as potential drugs compounds 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 II clinical trials program for tirasemtiv, and are planning to initiate a Phase III clinical development program of this drug candidate in patients with ALS in the second quarter of 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 have conducted a Phase I clinical trials program for CK-2127107 under this collaboration. We anticipate initiating a Phase II clinical trial of CK-2127107 in patients with SMA in the second half of 2015. 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 II clinical trials have been conducted with both intravenous and oral formulations of omecamtiv mecarbil. An intravenous formulation of omecamtiv mecarbil has been studied in a Phase IIb clinical trial in patients with acute heart failure, and an oral formulation of omecamtiv mecarbil is being studied in a Phase II clinical trial in patients with heart failure.

[Table of Contents](#)

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 \$44.4 million, \$49.5 million and \$35.6 million for 2014, 2013 and 2012, 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. Cytokinetics retains exclusive rights to tirasemtiv. We have conducted a Phase II clinical trials program for tirasemtiv, and are planning to initiate a Phase III clinical development program for this drug candidate in patients with ALS. We are also developing another drug candidate from this program, CK-2127107, which has been evaluated in Phase I clinical trials in collaboration with Astellas for potential indications associated with muscle weakness. We are planning to conduct a Phase II clinical trial for CK-2127107 in patients with SMA. 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 have conducted three “evidence of effect” Phase IIa clinical 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 IIb clinical trial of tirasemtiv in patients with ALS. We believe

[Table of Contents](#)

the results from BENEFIT-ALS support advancement into Phase III clinical development. We are planning to initiate a Phase III clinical development program for this drug candidate in patients with ALS by the end of 2015.

Tirasemtiv Clinical Development

BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS). In October 2012, we initiated BENEFIT-ALS, a Phase IIb, multi-national, double-blind, randomized, placebo-controlled, clinical trial designed to evaluate the safety, tolerability and efficacy of tirasemtiv in patients with ALS. BENEFIT-ALS enrolled patients in 73 centers in 8 countries. Patients enrolled in BENEFIT-ALS began treatment with open-label tirasemtiv at 125 mg twice daily. Patients who tolerated this open-label treatment for one week were randomized to receive 12 weeks of double-blind treatment with twice-daily oral ascending doses of tirasemtiv or placebo, beginning at 125 mg twice daily and increasing weekly up to 250 mg twice daily (or a dummy dose titration with placebo). Clinical assessments occurred every four weeks during double-blind treatment; patients also returned for follow-up evaluations at one and four weeks after their final dose of double-blind study medication. The primary efficacy analysis of BENEFIT-ALS compared the mean change from baseline in 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, to the average of the scores obtained after 8 and 12 weeks of double-blind treatment on tirasemtiv versus placebo.

In April 2014, BENEFIT-ALS results were presented at the 66th Annual Meeting of the American Academy of Neurology. The trial enrolled 711 patients into the open-label phase of the trial; subsequently, 605 patients were randomized 1:1 to double-blind treatment with either tirasemtiv or placebo. BENEFIT-ALS did not achieve its primary efficacy endpoint, the mean change from baseline in the ALSFRS-R (-2.98 points in the tirasemtiv group versus -2.40 points in the placebo group; $p = 0.11$). 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;

Table of Contents

- 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.

Planned Phase III Clinical Development: In October 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 have engaged with regulatory authorities in the U.S. and Europe regarding results from BENEFIT-ALS and plan to advance tirasemtiv into Phase III clinical development. While regulatory interactions are ongoing, we believe that current feedback from these regulatory authorities informs advancement of tirasemtiv to a Phase III clinical development program that is intended to potentially confirm and extend results from BENEFIT-ALS. Key clinical endpoints in the Phase III program will include measures of respiratory function after longer durations of treatment in patients with ALS, including effects on SVC. We have initiated non-clinical and clinical development planning activities for the Phase III program, and anticipate initiating the program in the second quarter of 2015.

Tirasemtiv Strategic and Commercial Planning. During 2014, we made preparations 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, with 90 to 95% of those diagnosed with ALS having the sporadic form. Of the remaining ALS patient population, 5 to 10% have a family history of the disease (familial ALS). In cases of familial ALS, there is an approximately 50% chance each offspring will develop the disease. 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 70 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 these concentrated markets could be an affordable independent commercialization opportunity for Cytokinetics.

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, in addition to the non-neuromuscular indications provided for in the Original Astellas Agreement.

[Table of Contents](#)

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 II clinical development. Cytokinetics will conduct the initial Phase II clinical trial in patients with SMA. We anticipate initiating this trial in the second half of 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 an 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 II clinical development. Cytokinetics is also eligible to potentially receive over \$20.0 million in reimbursement of sponsored research and development activities during the next two years of the collaboration. 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.

[Table of Contents](#)

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

In October 2014, we announced the completion of five Phase I clinical trials evaluating CK-2127107 in healthy volunteers, and certain other Phase II readiness activities, all in connection with the agreed development plan under our collaboration with Astellas.

Phase I Clinical Trials Program: The Phase I clinical trials demonstrated that CK-2127107 appeared well-tolerated in healthy volunteers and that exposures generally increased across 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 II clinical trials.

CY 5011 was a double-blind, randomized, placebo-controlled study designed to assess the safety, tolerability, and pharmacokinetics of single ascending oral doses of CK-2127107 administered to healthy adult males. Planned single doses of CK-2127107 up to 4000 mg, the highest dose administered in this trial, were well-tolerated without an emerging pattern of adverse events observed; therefore, a maximum tolerated dose could not be defined. The pharmacokinetic profile of CK-2127107 was linear and dose-proportional across the dose range studied with a mean terminal half-life compatible with once or twice daily dosing.

CY 5012 was a double-blind, randomized, placebo-controlled, parallel group study. The primary objective of CY 5012 was to assess the safety, tolerability, and pharmacokinetics of CK-2127107 following multiple ascending doses in healthy volunteers. This clinical trial consisted of three ascending dose cohorts of 12 young volunteers (ages 18-55), and two ascending dose cohorts of 12 elderly volunteers (ages 65-85), split evenly between men and women. In each cohort, volunteers received CK-2127107 or placebo in accordance with 2:1 randomization over a 10-day period. This clinical trial demonstrated that a 10-day course of CK-2127107, either 300 mg or 500 mg twice daily, was well-tolerated by both younger (18-55 years) and older (65-85 years) subjects. Plasma concentrations of CK-2127107 achieved steady state and no differences in pharmacokinetics between younger and older subjects were observed.

CY 5013 was a Phase I randomized, placebo-controlled, single dose, 4-period crossover study of CK-2127107 in healthy male volunteers. CY 5013 was designed to evaluate the change in the force-frequency profile and its relationship to dose and plasma concentrations of CK-2127107. This clinical trial demonstrated that the response of skeletal muscle to nerve input increased with both the dose and plasma concentration of CK-2127107 and were most evident in the middle of the range of stimulation frequencies tested, consistent with preclinical observations. Compared to pre-dose measurements, statistically significant, placebo-corrected increases in skeletal muscle function were demonstrated at every time point tested after dosing. This clinical trial demonstrated that CK-2127107 amplified the response of muscle to nerve activation following a single dose of CK-2127107 in these subjects and that the results observed in preclinical models were translated into humans.

CY 5014 was a Phase I clinical trial of CK-2127107 in healthy male volunteers. CY 5014 was a randomized, open-label, two-period crossover study designed to assess the relative oral bioavailability, pharmacokinetics, safety and tolerability of two oral formulations of CK-2127107. This clinical trial demonstrated that single doses of CK-2127107 in suspension, dosed at 300 mg and 1000 mg, were well-tolerated by all 25 healthy men enrolled and provided pharmacokinetic data on two different physical forms of CK-2127107 to inform ongoing development of tablet formulations for use in potential future trials.

CY 5015 was an open-label, randomized, single dose study designed to evaluate the pharmacokinetics, in a fed and fasted state, of an oral tablet form of CK-2127107 in healthy male volunteers. This clinical trial demonstrated that single doses of CK-2127107, administered at doses of 250 mg, 500 mg and 1000 mg, were well-tolerated and appeared appropriate for use in potential future clinical trials.

[Table of Contents](#)

Planned Phase II Clinical Development: Cytokinetics will conduct the initial Phase II clinical trial of CK-2127107 in patients with SMA. We anticipate initiating this trial in the second half of 2015.

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 the Type IV, who have a normal life span but with gradual weakness in the proximal muscles of the extremities resulting in mobility issues. Few treatment options exist for these patients, resulting in a high unmet need for new therapeutic options to address symptoms 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.

[Table of Contents](#)

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 I pharmacokinetic study intended to support inclusion of Japan in a potential Phase III 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 up to \$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 III 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 as an intravenous formulation for use in the hospital setting and as an oral formulation for use in the outpatient setting.

Omecamtiv Mecarbil Clinical Development

COSMIC-HF. In March 2013, we announced the initiation of dosing of patients in COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure). COSMIC-HF is a Phase II, 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 is being conducted by Amgen in collaboration with Cytokinetics. Cytokinetics and Amgen reviewed results from the dose escalation phase of COSMIC-HF and selected an oral formulation of omecamtiv mecarbil for evaluation in the expansion phase of the trial.

The expansion phase of COSMIC-HF has enrolled approximately 450 patients from clinical sites internationally. Patients were randomized 1:1:1 to receive placebo, 25 mg, or 50 mg twice daily of omecamtiv mecarbil. Escalation to the 50 mg dose depended on the plasma concentration of omecamtiv mecarbil following 2 weeks of oral dosing at 25 mg twice daily. The primary objective of the expansion phase of this trial is to characterize the safety, tolerability, and pharmacokinetics of omecamtiv mecarbil dosed orally during 20 weeks of treatment. The secondary objectives are to assess the changes from baseline in systolic ejection time, stroke volume, left ventricular end-systolic diameter, left ventricular end-diastolic diameter, heart rate and N-terminal pro-brain natriuretic peptide (a biomarker associated with

[Table of Contents](#)

the severity of heart failure) during 20 weeks of treatment. Recently, the Data Monitoring Committee reviewed data from COSMIC-HF and recommended that the trial continue without any changes to the protocol. The expansion phase of COSMIC-HF has enrolled over 400 patients; over 200 of these patients have completed dosing. We anticipate that patient enrollment in COSMIC-HF will conclude in the first quarter of 2015. We anticipate that results from COSMIC-HF will be available in the second half of 2015.

ATOMIC-AHF. In 2013, results from ATOMIC-AHF (Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure) were presented at the European Society of Cardiology Congress and the Heart Failure Society of America Annual Scientific Meeting. ATOMIC-AHF was an international, randomized, double-blind, placebo-controlled, Phase IIb clinical trial of intravenous omecamtiv mecarbil in patients with left ventricular systolic dysfunction hospitalized with acutely decompensated heart failure. 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 omecamtiv mecarbil treatment groups were not statistically different in their 7-point Likert scale dyspnea symptom response rates compared to the pooled placebo group ($p=0.33$); therefore, the primary endpoint was not met. Omecamtiv mecarbil demonstrated favorable dose- and concentration-related trends (nominal $p=0.025$ and nominal $p=0.007$, respectively) on dyspnea response. Improvement in dyspnea was observed in the highest omecamtiv mecarbil dose group when compared against its paired placebo group in the third cohort (dyspnea symptom response in 51 percent of subjects on omecamtiv mecarbil versus 37 percent on placebo, nominal $p=0.03$). The incidence of worsening heart failure within seven days of initiating treatment was 17 percent in the pooled placebo group and was 13 percent, 8 percent and 9 percent on omecamtiv mecarbil in the first, second and third cohorts, respectively. Systolic ejection time, the echocardiographic signature of omecamtiv mecarbil, increased in a concentration-dependent manner similar to that previously reported in healthy volunteers and stable heart failure patients.

Rates of adverse events (AEs), serious AEs, adjudicated deaths and hospitalizations were similar between omecamtiv mecarbil and placebo groups. There were seven post-randomization myocardial infarctions in the treatment groups receiving omecamtiv mecarbil compared with three in the placebo groups (2.3 percent vs. 1.0 percent, respectively). However, there was no relationship between the maximum increase from the baseline troponin (a biomarker specific for cardiac muscle damage) and increasing plasma concentrations of omecamtiv mecarbil. Four of the myocardial infarctions occurred more than seven days following termination of the 48-hour drug infusion. The estimated plasma concentrations near the time of these events were zero. Three of these events occurred in patients who received omecamtiv mecarbil and one occurred in a patient who received placebo. One myocardial infarction occurred subsequent to a percutaneous coronary intervention in a patient who received omecamtiv mecarbil. One myocardial infarction occurred in a patient with sepsis who received placebo. Omecamtiv mecarbil was not associated with an increased incidence of tachyarrhythmias nor were heart rate or blood pressure adversely affected.

Pharmacokinetics Bridging Study. In 2014, we conducted CY 1211, a Phase I study comparing the tolerability and pharmacokinetics of omecamtiv mecarbil between Japanese and Caucasian healthy volunteers. Results from this trial indicated no clinically meaningful differences between the two groups studied. Data from CY 1211 are expected to inform plans for the development of omecamtiv mecarbil in Japan and the inclusion of Japan in potential global Phase III program. This trial was conducted by Cytokinetics in collaboration with Amgen. Amgen reimbursed us for the costs of the trial.

[Table of Contents](#)

Prior Clinical Experience with Omecamtiv Mecarbil. Seven Phase I clinical trials of omecamtiv mecarbil have been conducted in healthy subjects: five conducted by Cytokinetics and two conducted by Amgen in collaboration with Cytokinetics. Cytokinetics has also conducted two Phase IIa 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.

In January 2015, a manuscript titled, “Safety and Tolerability of Omecamtiv Mecarbil During Exercise in Patients With Ischemic Cardiomyopathy and Angina” was published in the journal JACC Heart Failure. This manuscript highlights the results from a previously reported Phase IIa clinical trial designed to evaluate the safety and tolerability of treatment of omecamtiv mecarbil during symptom-limited exercise in patients with ischemic cardiomyopathy and angina. The publication concluded that doses of omecamtiv mecarbil, which produce plasma concentrations previously shown to increase systolic function, were well tolerated during exercise in patients with ischemic cardiomyopathy and angina who were evaluated in this trial and that there was no indication that omecamtiv mecarbil increased the likelihood of myocardial ischemia in this high-risk population.

Ongoing Research in Cardiac Muscle Contractility. In 2013, we agreed with Amgen to additional research activities conducted in 2014 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 through 2015. 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 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

[Table of Contents](#)

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, 2014, we owned or controlled 108 issued U.S. patents and over 150 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 a U.S. patent covering our skeletal muscle sarcomere activators including, but not limited to, tirasemtiv, each of which will expire in 2027 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;

[Table of Contents](#)

- 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

[Table of Contents](#)

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.

[Table of Contents](#)

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 I:* Phase I 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 I, sufficient information about the drug candidate's pharmacokinetics and pharmacological effects should be obtained to permit the design of well-controlled, scientifically valid, Phase II trials.
- *Phase II:* Phase II includes the early controlled clinical studies conducted to obtain some preliminary data on the effectiveness of the drug 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 II clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase III clinical trials. Phase IIa 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 IIb clinical trial, which is a second, typically larger, confirmatory Phase II trial that could, if positive and accepted by a regulatory authority, support approval of a drug candidate.
- *Phase III:* If the Phase II clinical trials demonstrate that a dose range of the drug candidate is potentially effective and has an acceptable safety profile, Phase III 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 III 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 III 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 IV 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.

[Table of Contents](#)

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 III 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 IV 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 which 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

[Table of Contents](#)

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 option of requesting evaluation of studies using surrogate endpoints, which are laboratory measurements or physical signs used as an indirect or substitute measurement representing a clinically meaningful outcome.

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;

[Table of Contents](#)

- 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 Neurltus 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

[Table of Contents](#)

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.

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, 2014, our workforce consisted of 92 full-time employees, 30 of whom hold Ph.D. or M.D. degrees, or both, and 17 of whom hold other advanced degrees. Of our total full-time employees, 66 are engaged in research and development and 26 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

[Table of Contents](#)

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, equipment financings, interest on investments and government 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 III 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.

[Table of Contents](#)

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 omeacamtiv mecarbiv 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 I clinical trials in healthy volunteers and clinical results from Phase I and II 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 II clinical trials may not be indicative of the results from later clinical trials. For example, early Phase II clinical

[Table of Contents](#)

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 IIb 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

[Table of Contents](#)

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 III clinical trials evaluating other compounds as potential treatments for patients with ALS may suggest an increased risk that our planned Phase III 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 III 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 dexamipexole, 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 III 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 its benefits. Further, even if we believe the data collected from our planned Phase III 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.

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;

[Table of Contents](#)

- 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.

[Table of Contents](#)

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 III 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

[Table of Contents](#)

indications worldwide. We expect to conduct the early stage development of CK-2127107 including a Phase II clinical trial of 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

[Table of Contents](#)

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;

[Table of Contents](#)

- 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 planned Phase II 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

[Table of Contents](#)

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.

[Table of Contents](#)

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.

[Table of Contents](#)

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.

[Table of Contents](#)

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;

[Table of Contents](#)

- 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.

[Table of Contents](#)

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 Carpacor Therapeutics, Inc., TRV-027, which is being developed by Trevena; ularitide, which is being developed by Cardioentis 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;

[Table of Contents](#)

- 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

[Table of Contents](#)

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

[Table of Contents](#)

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

[Table of Contents](#)

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

[Table of Contents](#)

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

[Table of Contents](#)

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

[Table of Contents](#)

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.

[Table of Contents](#)

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 omeacamtiv 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;

[Table of Contents](#)

- 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 27, 2015, our executive officers, directors and their affiliates beneficially owned or controlled approximately 6.6% 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

[Table of Contents](#)

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 27, 2015, there were 6,691,096 shares of common stock issuable upon the exercise of warrants, having a weighted average exercise price of \$6.05 per share, and 4,147,929 shares of common stock issuable upon the exercise of stock options outstanding, having a weighted average exercise price of \$11.50 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

[Table of Contents](#)

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 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 International, Ltd. (“Pharm-Olam”) 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. 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 hearing on that motion is currently set for March 20, 2015.

On November 28, 2014, 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 this lawsuit, Pharm-Olam is seeking declaratory judgments 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 International, Inc. (“Datatrak”), the provider of the core EDC and IWRS system for BENEFIT-ALS, 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.

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 (as adjusted for the one-for-six reverse split of our common stock which became effective June 24, 2013).

	Closing Sale Price	
	High	Low
2013:		
First Quarter	\$ 7.14	\$4.02
Second Quarter	\$12.96	\$6.42
Third Quarter	\$13.82	\$7.57
Fourth Quarter	\$ 7.47	\$6.01
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

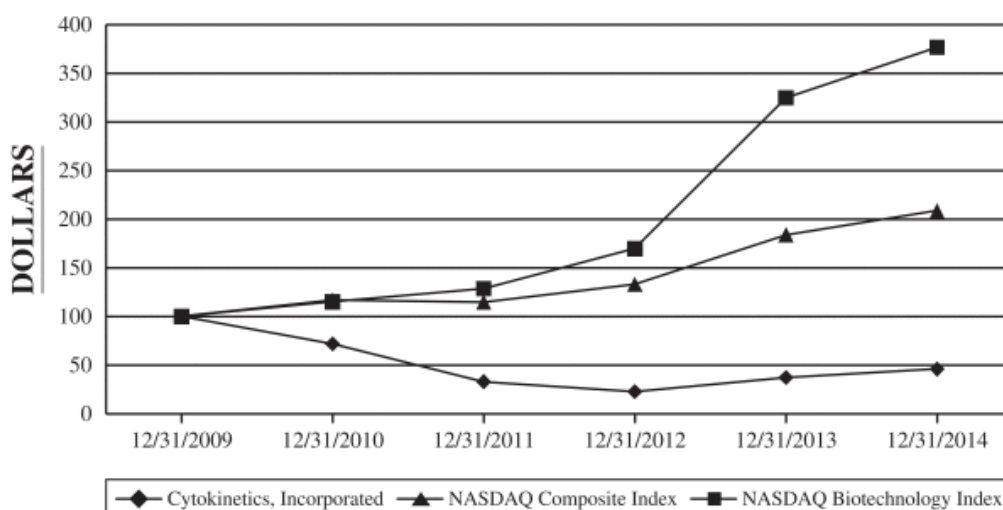
On February 27, 2015, the last reported sale price for our common stock on the NASDAQ Capital Market was \$7.71 per share. We currently expect to retain future earnings, if any, for use in the operation and expansion of our business and have not paid and do not in the foreseeable future anticipate paying any cash dividends. As of February 27, 2015, there were 72 holders of record of our common stock.

[Table of Contents](#)

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, 2009 through December 31, 2014 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.

	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14
Cytokinetics, Incorporated	\$100.00	\$ 71.82	\$ 32.99	\$ 22.68	\$ 37.23	\$ 45.88
NASDAQ Composite Index	\$100.00	\$116.91	\$114.81	\$133.07	\$184.06	\$208.71
NASDAQ Biotechnology Index	\$100.00	\$115.01	\$128.59	\$169.61	\$324.80	\$376.68

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.

[Table of Contents](#)

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,				
	2014	2013	2012	2011	2010
	(In thousands, except per share amounts)				
Statement of Operations Data:					
Revenues:					
Research and development revenues from related parties(1)	\$ 19,538	\$ 2,019	\$ 4,177	\$ 2,054	\$ 1,487
Research and development, grant and other revenues	17,566	7,547	3,382	1,946	1,090
License revenues from related parties(1)	—	17,230	—	—	—
License revenues	9,836	3,852	—	—	—
Total revenues	<u>46,940</u>	<u>30,648</u>	<u>7,559</u>	<u>4,000</u>	<u>2,577</u>
Operating expenses:					
Research and development	44,426	49,450	35,643	37,182	38,013
General and administrative	17,268	15,092	12,429	13,590	14,199
Restructuring charges (reversals)	—	—	(56)	1,192	—
Total operating expenses	<u>61,694</u>	<u>64,542</u>	<u>48,016</u>	<u>51,964</u>	<u>52,212</u>
Operating income loss	<u>(14,754)</u>	<u>(33,894)</u>	<u>(40,457)</u>	<u>(47,964)</u>	<u>(49,635)</u>
Interest and other, net	108	177	87	104	172
Income (loss) before income taxes	<u>(14,646)</u>	<u>(33,717)</u>	<u>(40,370)</u>	<u>(47,860)</u>	<u>(49,463)</u>
Income tax provision (benefit)	—	—	—	—	(176)
Net loss	<u>(14,646)</u>	<u>(33,717)</u>	<u>(40,370)</u>	<u>(47,860)</u>	<u>(49,287)</u>
Deemed dividend related to beneficial conversion feature of convertible preferred stock	—	—	(1,307)	(2,857)	—
Net loss allocable to common stockholders:	<u>\$(14,646)</u>	<u>\$(33,717)</u>	<u>\$(41,677)</u>	<u>\$(50,717)</u>	<u>\$(49,287)</u>
Net loss per share allocable to common stockholders:(2)					
Basic	<u>\$ (0.41)</u>	<u>\$ (1.24)</u>	<u>\$ (2.30)</u>	<u>\$ (4.30)</u>	<u>\$ (4.61)</u>
Diluted	<u>\$ (0.41)</u>	<u>\$ (1.24)</u>	<u>\$ (2.30)</u>	<u>\$ (4.30)</u>	<u>\$ (4.61)</u>
Weighted average shares used in computing net loss per share allocable to common stockholders:(3)					
Basic	<u>35,709</u>	<u>27,275</u>	<u>18,107</u>	<u>11,800</u>	<u>10,694</u>
Diluted	<u>35,709</u>	<u>27,275</u>	<u>18,107</u>	<u>11,800</u>	<u>10,694</u>

[Table of Contents](#)

	As of December 31,				
	2014	2013	2012	2011	2010
	(In thousands)				
Balance Sheet Data:					
Cash and cash equivalents, investments, auction rate securities (“ARS”) and investment put option related to ARS	\$ 83,228	\$ 80,230	\$ 74,000	\$ 49,023	\$ 72,845
Restricted cash	—	—	—	196	788
Working capital	107,276	52,634	69,322	46,548	66,174
Total assets	132,968	83,188	77,551	52,773	77,992
Long-term portion of equipment financing lines	—	—	—	—	152
Accumulated deficit	(497,243)	(482,597)	(448,880)	(408,510)	(360,650)
Total stockholders’ equity(2)	92,064	54,442	70,085	48,178	70,516

(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 2010, we sold 889,970 shares of common stock to Kingsbridge Capital Limited pursuant to the 2007 committed equity financing facility for net proceeds of \$14.0 million. 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

[Table of Contents](#)

aggregate purchase price of \$10.0 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 clinical-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. 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. Our earlier-stage research is 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 is the lead drug candidate from this program. We retain exclusive rights to tirasemtiv. We have conducted a Phase II clinical development program for tirasemtiv, and are planning to initiate a Phase III clinical development program for this drug candidate in patients with ALS. We are also developing another drug candidate from this program, CK-2127107, which has been evaluated in Phase I clinical trials in collaboration with Astellas for potential indications associated with muscle weakness. We are planning to conduct a Phase II clinical trial for CK-2127107 in patients with SMA. 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 have conducted three “evidence of effect” Phase IIa clinical 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

[Table of Contents](#)

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 IIb clinical trial of tirasemtiv in patients with ALS. We believe the results from BENEFIT-ALS support advancement of tirasemtiv into Phase III clinical development. We are planning to initiate a Phase III clinical development program for this drug candidate in patients with ALS in the second quarter of 2015.

Tirasemtiv Clinical Development

BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS). In October 2012, we initiated BENEFIT-ALS, a Phase IIb, multi-national, double-blind, randomized, placebo-controlled, clinical trial designed to evaluate the safety, tolerability and efficacy of tirasemtiv in patients with ALS. BENEFIT-ALS enrolled patients in 73 centers in 8 countries. Patients enrolled in BENEFIT-ALS began treatment with open-label tirasemtiv at 125 mg twice daily. Patients who tolerated this open-label treatment for one week were randomized to receive 12 weeks of double-blind treatment with twice-daily oral ascending doses of tirasemtiv or placebo, beginning at 125 mg twice daily and increasing weekly up to 250 mg twice daily (or a dummy dose titration with placebo). Clinical assessments occurred every four weeks during double-blind treatment; patients also returned for follow-up evaluations at one and four weeks after their final dose of double-blind study medication. The primary efficacy analysis of BENEFIT-ALS compared the mean change from baseline in the ALS Functional Rating Scale in its revised form (ALSFRRS-R), a clinically validated instrument designed to measure disease progression and changes in functional status, to the average of the scores obtained after 8 and 12 weeks of double-blind treatment on tirasemtiv versus placebo.

In April 2014, BENEFIT-ALS results were presented at the 66th Annual Meeting of the American Academy of Neurology. 711 patients were enrolled into the open-label phase of the trial; subsequently, 605 patients were randomized 1:1 to double-blind treatment with either tirasemtiv or placebo. BENEFIT-ALS did not achieve its primary efficacy endpoint, the mean change from baseline in the ALSFRS-R (-2.98 points in the tirasemtiv group versus -2.40 points in the placebo group; $p = 0.11$). 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.

[Table of Contents](#)

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.

Planned Phase III Clinical Development: In October 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 have engaged with regulatory authorities in the U.S. and Europe regarding results from BENEFIT-ALS and plan to advance tirasemtiv into Phase III clinical development. While regulatory interactions are ongoing, we believe that current feedback from these regulatory authorities informs advancement of tirasemtiv to a Phase III clinical development program that is intended to potentially confirm and extend results from BENEFIT-ALS. Key clinical endpoints in the Phase III program will include measures of respiratory function after longer durations of treatment in patients with ALS, including effects on SVC. We have initiated non-clinical and clinical development planning activities for the Phase III program, and anticipate initiating the program in the second quarter of 2015.

Tirasemtiv Strategic and Commercial Planning. During 2014, we made preparations 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 commercialization of tirasemtiv as a potential 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.

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

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, 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 II clinical development. Cytokinetics will conduct the initial Phase II clinical trial in patients with SMA. We anticipate initiating this trial

[Table of Contents](#)

in the second half of 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 an 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 also 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 II clinical development. Cytokinetics is also eligible to potentially receive over \$20.0 million in reimbursement of sponsored research and development activities during the next two years of the collaboration. 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 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.

[Table of Contents](#)

CK-2127107 Clinical Development

Phase I Clinical Trials Program: In October 2014, we announced the completion of five Phase I clinical trials evaluating CK-2127107 in healthy volunteers, and certain other Phase II readiness activities, all in connection with the agreed development plan under our collaboration with Astellas. These Phase I clinical trials demonstrated that CK-2127107 appeared well-tolerated in healthy volunteers and that exposures generally increased across 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 II clinical trials.

Planned Phase II Clinical Development: Cytokinetics will conduct the initial Phase II clinical trial of CK-2127107 in patients with SMA. We anticipate initiating this trial in the second half of 2015.

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 we perform.

Research and Development Expenses: We recorded research and development expenses for activities relating to our skeletal muscle contractility program of approximately \$32.9 million, \$40.8 million and \$24.9 million in the years ended December 31, 2014, 2013 and 2012, respectively. We recognized research and development revenue from Astellas of \$32.4 million in 2014, 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 tirasentiv, CK-2127107 or other compounds from this program into and through development.

Cardiac Muscle Contractility Program

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 as an intravenous formulation for use in the hospital setting and as an oral formulation for use in the outpatient setting.

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

[Table of Contents](#)

development and commercialization of omecamtiv mecarbil and related compounds at its expense worldwide (excluding Japan), subject to our development and commercialization participation rights. Amgen will reimburse 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 I pharmacokinetic study intended to support inclusion of Japan in a potential Phase III clinical development program and potential global registration dossier for omecamtiv mecarbil. Amgen will reimburse 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. During 2014, we recorded \$4.5 million in reimbursement of sponsored research and development activities relating to the Amgen Agreement.

Under the Amgen Agreement as amended, we are eligible for potential pre-commercialization and commercialization milestone payments of up to \$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 III 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 Clinical Development

COSMIC-HF. In March 2013, we announced the initiation of dosing of patients in COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure). COSMIC-HF is a Phase II, 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 is being conducted by Amgen in collaboration with Cytokinetics. Cytokinetics and Amgen reviewed results from the dose escalation phase of COSMIC-HF and selected an oral formulation of omecamtiv mecarbil for evaluation in the expansion phase of the trial.

The expansion phase of COSMIC-HF has enrolled approximately 450 patients from approximately 95 clinical sites internationally. Patients will be randomized 1:1:1 to receive placebo, 25 mg, or 50 mg twice daily of omecamtiv mecarbil. Escalation to the 50 mg dose will depend on the plasma concentration of omecamtiv mecarbil following 2 weeks of oral dosing at 25 mg twice daily. The primary objective of the expansion phase of this trial is to characterize the safety, tolerability, and pharmacokinetics of omecamtiv mecarbil dosed orally during 20 weeks of treatment. The secondary objectives are to assess the changes from baseline in systolic ejection time, stroke volume, left ventricular end-systolic diameter, left ventricular

[Table of Contents](#)

end-diastolic diameter, heart rate and N-terminal pro-brain natriuretic peptide (a biomarker associated with the severity of heart failure) during 20 weeks of treatment. In the fourth quarter of 2014, the Data Monitoring Committee reviewed data from COSMIC-HF and recommended that the trial continue without any changes to the protocol. The expansion phase of COSMIC-HF has enrolled over 400 patients; over 200 of these patients have completed dosing. We anticipate that patient enrollment in COSMIC-HF will conclude in the first quarter of 2015. We anticipate that results from COSMIC-HF will be available in the second half of 2015.

ATOMIC-AHF. In September 2013, results from ATOMIC-AHF (Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure) were presented at the European Society of Cardiology Congress and the Heart Failure Society of America Annual Scientific Meeting. ATOMIC-AHF was an international, randomized, double-blind, placebo-controlled, Phase IIb clinical trial of intravenous omecamtiv mecarbil in patients with left ventricular systolic dysfunction hospitalized with acutely decompensated heart failure. 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 omecamtiv mecarbil treatment groups were not statistically different in their 7-point Likert scale dyspnea symptom response rates compared to the pooled placebo group ($p=0.33$); therefore, the primary endpoint was not met. Omecamtiv mecarbil demonstrated favorable dose- and concentration-related trends (nominal $p=0.025$ and nominal $p=0.007$, respectively) on dyspnea response. Improvement in dyspnea was observed in the highest omecamtiv mecarbil dose group when compared against its paired placebo group in the third cohort (dyspnea symptom response in 51 percent of subjects on omecamtiv mecarbil versus 37 percent on placebo, nominal $p=0.03$). The incidence of worsening heart failure within seven days of initiating treatment was 17 percent in the pooled placebo group and was 13 percent, 8 percent and 9 percent on omecamtiv mecarbil in the first, second and third cohorts, respectively. Systolic ejection time, the echocardiographic signature of omecamtiv mecarbil, increased in a concentration-dependent manner similar to that previously reported in healthy volunteers and stable heart failure patients.

Rates of adverse events (AEs), serious AEs, adjudicated deaths and hospitalizations were similar between omecamtiv mecarbil and placebo groups. There were seven post-randomization myocardial infarctions in the treatment groups receiving omecamtiv mecarbil compared with three in the placebo groups (2.3 percent vs. 1.0 percent, respectively). However, there was no relationship between the maximum increase from the baseline troponin (a biomarker specific for cardiac muscle damage) and increasing plasma concentrations of omecamtiv mecarbil. Four of the myocardial infarctions occurred more than seven days following termination of the 48-hour drug infusion. The estimated plasma concentrations near the time of these events were zero. Three of these events occurred in patients who received omecamtiv mecarbil and one occurred in a patient who received placebo. One myocardial infarction occurred subsequent to a percutaneous coronary intervention in a patient who received omecamtiv mecarbil. One myocardial infarction occurred in a patient with sepsis who received placebo. Omecamtiv mecarbil was not associated with an increased incidence of tachyarrhythmias nor were heart rate or blood pressure adversely affected.

Pharmacokinetics Bridging Study. During the fourth quarter of 2014, we announced that CY 1211, a Phase I study comparing the tolerability and pharmacokinetics of omecamtiv mecarbil between Japanese and Caucasian healthy volunteers, had been completed and indicated no clinically meaningful differences between the two groups studied. Data from CY 1211 are expected to inform plans for the development of omecamtiv

[Table of Contents](#)

mecarbil in Japan and the inclusion of Japan in potential global Phase III program activities. This trial was conducted by Cytokinetics in collaboration with Amgen. Amgen reimbursed us for the costs of the trial.

Prior Clinical Experience with Omecamtiv Mecarbil. Seven Phase I clinical trials of omecamtiv mecarbil have been conducted in healthy subjects: five conducted by Cytokinetics and two conducted by Amgen in collaboration with Cytokinetics. Cytokinetics has also conducted two Phase IIa 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.

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. In 2013, we agreed with Amgen to additional research activities intended to be conducted through 2014 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 through 2015. Under the Amgen Agreement, Amgen will reimburse us for certain research activities we perform.

Research and Development Expenses. We funded all research and development costs associated with this program prior to Amgen's option exercise in May 2009. We recorded research and development expenses for activities relating to our cardiac muscle contractility program of approximately \$7.4 million, \$3.4 million and \$4.5 million in the years ended December 31, 2014, 2013 and 2012, respectively. We recognized research and development revenue from Amgen of \$4.5 million in 2014, \$2.0 million in 2013 and \$4.2 million in 2012, 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

[Table of Contents](#)

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 omeamtiv 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

[Table of Contents](#)

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, Global Blood Therapeutics, Inc., formerly known as Global Blood Targeting, Inc. (“Global Blood”) and MyoKardia, Inc. (“MyoKardia”) and grant revenues from NINDS.

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. (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 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 I pharmacokinetic study intended to support inclusion of Japan in a potential Phase III 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, 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.

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. In 2013, we recognized \$3.9 million of the \$16.0 million upfront license fee as license revenue and as of December 31, 2013, we deferred

[Table of Contents](#)

the remaining \$12.1 million. We also recognized \$6.4 million in revenue in 2013 for reimbursement of sponsored research and development activities under the Original Astellas Agreement. In 2014 we recognized \$9.8 million of the \$16.0 million upfront license fee as license revenue and as of December 31, 2014, we deferred the remaining \$2.3 million. Also in 2014 and under the Original Astellas Agreement, we recognized \$15.4 million in revenue for reimbursement of sponsored research and development activities, \$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 II clinical development.

We received an 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 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 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. 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 II clinical development. Cytokinetics is also eligible to potentially receive over \$20.0 million in reimbursement of sponsored research and development activities during the next two years of the collaboration. 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.

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 III 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

[Table of Contents](#)

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.

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.

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.

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.

Restructuring

In October 2011, we announced a restructuring plan pursuant to which we reduced our workforce. We completed all restructuring activities and recognized all anticipated restructuring charges by December 31, 2012.

Stock Compensation

The following table summarizes stock-based compensation related to stock options, restricted stock awards, restricted stock units, and employee stock purchases for 2014, 2013 and 2012 (in thousands):

	Years Ended December 31,		
	2014	2013	2012
Research and development	\$1,361	\$1,538	\$1,801
General and administrative	1,969	2,059	1,982
Stock-based compensation included in operating expenses	<u>\$3,330</u>	<u>\$3,597</u>	<u>\$3,783</u>

[Table of Contents](#)

As of December 31, 2014, there was \$5.7 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted-average period of 2.52 years and \$0.3 million of unrecognized compensation cost related to unvested restricted stock units, which is expected to be recognized over a weighted-average period of 0.83 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, 2014, 2013 or 2012 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 and difficulty in accurately forecasting our future results, we maintained a full valuation allowance on the net deferred tax assets as of December 31, 2014, 2013 and 2012. 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 \$1.0 million in 2014, \$13.7 million in 2013 and \$21.1 million in 2012.

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 2014, 2013 and 2012. 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.

[Table of Contents](#)**Results of Operations***Years ended December 31, 2014, 2013 and 2012**Revenues*

	Years Ended December 31,			Increase (Decrease)	
	2014	2013	2012	2014	2013
	(In millions)				
Research and development revenues from related parties	\$ 19.5	\$ 2.0	\$ 4.2	\$ 17.5	\$ (2.2)
Research and development, grant and other revenues	17.6	7.5	3.4	10.1	4.1
License revenues from related parties	—	17.2	—	(17.2)	17.2
License revenues	9.8	3.9	—	5.9	3.9
Total revenues	<u>\$46.9</u>	<u>\$ 30.6</u>	<u>\$ 7.6</u>	<u>\$ 16.3</u>	<u>\$23.0</u>

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, consisted of \$15.0 million in milestone revenues. All research and development revenues from Astellas, prior to it becoming a related party and including a \$2.0 million milestone fee recorded in the first quarter of 2014, are classified in research and development, grant and other revenues. Revenues from Amgen were \$4.5 million, \$2.0 million and \$4.2 million in 2014, 2013 and 2012, respectively. Revenues from Amgen in 2014 consisted of reimbursement of internal costs of certain full-time employee equivalents, and recognition of allocated consideration relating to the execution of the Amgen Agreement Amendment in June 2013. Revenues from Amgen in 2013 and 2012 consisted of reimbursement of internal costs of certain full-time employee equivalents.

Research and development, grant and other revenues in 2014 consisted primarily of \$15.4 million of research and development revenues from our collaboration with Astellas, \$2.0 million in milestone revenues from Astellas and \$0.1 million in revenue from our collaboration with MyoKardia. Research and development, grant and other revenues in 2013 included \$6.4 million of research program reimbursement revenues from our collaboration with Astellas and \$1.0 million in revenue from our collaboration with MyoKardia. Research and development, grant and other revenues in 2012 of \$3.4 million included grant revenue from the NINDS, revenue from Global Blood and revenue from MyoKardia.

License revenues from related parties refers to license revenues from our strategic alliance with Amgen. Revenues from Amgen of \$17.2 million in 2013 included 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. In conjunction with 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 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 are recognizing this revenue over the term of the research and development services using the proportional performance model.

[Table of Contents](#)

Research and development expenses

	Years Ended December 31,			Increase (Decrease)	
	2014	2013	2012	2014	2013
	(In millions)				
Research and development expenses	\$44.4	\$49.5	\$35.6	\$(5.1)	\$13.9

Research and development expenses were \$44.4 million and \$49.5 million in 2014 and 2013, respectively. The decrease of \$5.1 million in research and development expenses in 2014 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 personnel-related costs due to increased headcount. The increase of \$13.9 million in research and development expenses in 2013 was primarily due to increased spending for outsourced clinical costs and laboratory costs totaling \$14.0 million related to the BENEFIT-ALS clinical trial, partially offset by decreased spending for outsourced preclinical expense.

From a program perspective, the \$5.1 million decrease in research and development spending in 2014 compared to 2013 was primarily due to reduced spending for our skeletal muscle contractility program, partially offset by increased spending for our cardiac muscle contractility program. The \$13.9 million increase in research and development spending in 2013 compared to 2012 was primarily due to increased spending of \$15.9 million for our skeletal muscle contractility program.

The following presents our research and development expenses by program:

	Years Ended December 31,			Increase (Decrease)	
	2014	2013	2012	2014	2013
	(In millions)				
Cardiac muscle contractility	\$ 7.4	\$ 3.4	\$ 4.5	\$ 4.0	\$(1.1)
Skeletal muscle contractility	32.9	40.8	24.9	(7.9)	15.9
Smooth muscle contractility	—	0.2	1.8	(0.2)	(1.6)
All other research programs	4.1	5.1	4.4	(1.0)	0.7
Total research and development expenses	<u>\$44.4</u>	<u>\$49.5</u>	<u>\$35.6</u>	<u>\$(5.1)</u>	<u>\$13.9</u>

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 in 2015 compared to 2014 and that they will be in the range of \$56.0 million to \$59.0 million. We expect to continue development of our drug candidate tirasemtiv for the potential treatment of ALS. As part of 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. As part of our strategic alliance with Amgen, we expect to continue development of our drug candidate omecamtiv mecarbil for the potential treatment of heart failure. Non-cash expenses such as stock-based compensation and depreciation of approximately \$1.5 million are included in our estimate of 2015 research and development expenses.

Table of Contents

General and administrative expenses

	Years Ended December 31,			Increase (Decrease)	
	2014	2013	2012	2014	2013
	(In millions)				
General and administrative expenses	\$17.3	\$15.1	\$12.4	\$2.2	\$2.7

General and administrative expenses increased in 2014 compared to 2013 and increased in 2013 compared to 2012. The increase of \$2.2 million in 2014 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. The increase in 2013 was primarily due to increased spending of \$1.7 million for personnel-related costs, \$1.4 million for outside services and \$0.2 million for legal expenses.

We expect that general and administrative expenses in 2015 will increase compared to 2014 and will be in the range of \$18.0 million to \$20.0 million. Non-cash expenses such as stock-based compensation and depreciation of approximately \$2.1 million are included in our estimate of 2015 general and administrative expenses.

Interest and Other, net

Components of Interest and Other, net are as follows:

	Years Ended December 31,			Increase (Decrease)	
	2014	2013	2012	2014	2013
	(In millions)				
Interest income and other income	\$ 0.1	\$ 0.1	\$ 0.1	\$ —	\$ —
Interest expense and other expense	—	0.1	—	(0.1)	0.1
Interest and Other, net	<u>\$ 0.1</u>	<u>\$ 0.2</u>	<u>\$ 0.1</u>	<u>\$(0.1)</u>	<u>\$ 0.1</u>

Interest income and other income consisted primarily of interest income generated from our cash, cash equivalents and investments. Interest expense and other expense in 2013 consisted solely of net gains realized upon disposal of equipment.

Liquidity and Capital Resources

From August 5, 1997, our date of inception, through December 31, 2014, we funded our operations through the sale of equity securities, non-equity payments from collaborators, equipment financings, government grants and interest income.

We have received net proceeds from the sale of equity securities of \$489.1 million from August 5, 1997, the date of our inception, through December 31, 2014, 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 in 2001, GSK made a \$14.0 million equity investment in Cytokinetics. GSK made additional equity investments in Cytokinetics 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, which we received in June 2013. 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.

[Table of Contents](#)

On a cumulative basis through December 31, 2014, we have received \$128.7 million in non-equity payments from Amgen, \$30.1 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.

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 approximately \$25.5 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 2014, we recognized revenue of \$17.0 million 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.

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

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

[Table of Contents](#)

\$9.90 per share, for aggregate gross proceeds of approximately \$20.1 million. After issuance costs of approximately \$0.2 million, the net proceeds were approximately \$19.9 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.

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, 2014, warrants to purchase 6,577,928 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.

[Table of Contents](#)

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.

Sources and Uses of Cash

Our cash, cash equivalents and investments totaled \$83.2 million at December 31, 2014, compared to \$80.2 million at December 31, 2013. The increase of \$3.0 million was primarily due to net proceeds received of \$37.5 million from the February 2014 public offering and proceeds of \$10.0 million from the sale of common stock to Astellas in December 2014, partially offset by the use of cash to fund operations.

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 used in operating activities was \$7.7 million in the year ended December 31, 2013 and primarily resulted from the net loss of \$33.7 million less \$16.2 million of deferred revenue, \$3.6 million of non-cash stock compensation expense and increased payables and accruals of \$5.1 million.

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 used in investing activities was \$1.5 million in the year ended December 31, 2013 and primarily consisted cash used to purchase investments, net of proceeds from the maturity of investments, of \$1.0 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. Net cash provided by financing activities was \$14.5 million in the year ended December 31, 2013 and primarily consisted of the purchase of stock by Amgen (see Note 7, "Related Party Research and Development Arrangements", in the Notes to Consolidated Financial Statements) and common stock sold pursuant to the MLV Agreement totaling \$7.5 million. Repurchases of common stock in 2013 to satisfy employee withholding obligations totaled \$0.6 million.

Shelf Registration Statements. In November 2011, we filed a shelf registration statement with the SEC, which was declared effective in December 2011 (the "December 2011 Shelf"). The December 2011 Shelf allowed us to issue securities from time to time for an aggregate offering price of up to \$100.0 million. In June 2012, we filed a supplemental shelf registration statement with the SEC, which was declared effective in June 2012 (the "Supplemental Shelf"). The Supplemental Shelf allowed us to issue additional securities from time to time for an aggregate offering price of up to \$20.0 million, and for a total aggregate offering price under the December 2011 Shelf and the Supplemental Shelf of up to \$120.0 million. The December 2011 Shelf and the Supplemental Shelf expired in December 2014.

[Table of Contents](#)

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 allowed 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 27, 2015, \$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.

Contractual Obligations and Commitments

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

	Payments Due by Period				Total
	Within One Year	One to Three Years	Three to Five Years	After Five Years	
Operating lease obligations(1)	<u>\$ 3,390</u>	<u>\$ 7,130</u>	<u>\$ 1,860</u>	<u>\$ —</u>	<u>\$12,380</u>

- (1) 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;

[Table of Contents](#)

- 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 \$497.2 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

[Table of Contents](#)

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 municipal and government agency bonds, commercial paper, 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. Our collaborations prior to January 1, 2011 with multiple elements were evaluated and divided into separate units of accounting if certain criteria were met, including whether the delivered element had stand-alone value to the customer and whether there were vendor-specific objective and reliable evidence ("VSOE") of the fair value of the undelivered items. The consideration we received was allocated among the separate units based on their respective fair values, and

[Table of Contents](#)

the applicable revenue recognition criteria were applied to each of the separate units. The consideration we received was combined and recognized as a single unit of accounting when criteria for separation were not met.

On January 1, 2011, Accounting Standards Codification (“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 we entered into on or after January 1, 2011. Under this updated guidance, revenue will be 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. In accordance with ASC 605-25, 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

[Table of Contents](#)

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.

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.

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

[Table of Contents](#)

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, 2014, 2013 or 2012 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 and difficulty in accurately forecasting our future results, we maintained a full valuation allowance on the net deferred tax assets as of December 31, 2014, 2013 and 2012. 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 \$1.0 million in 2014, \$13.7 million in 2013 and \$21.1 million in 2012.

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.

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.

Interest accrued related to unrecognized tax benefits and penalties was zero for 2014, 2013 and 2012. 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.

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.

[Table of Contents](#)**Item 7A. Quantitative and Qualitative Disclosures About Market Risk****Interest Rate and Market Risk**

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):

	2015	Total	Fair Value at December 31, 2014
Assets:			
Investments	\$63,013	\$63,013	\$ 63,013
Average interest rate	0.17%	0.17%	

[Table of Contents](#)

Item 8. *Financial Statements and Supplementary Data*

**CYTOKINETICS, INCORPORATED
INDEX TO FINANCIAL STATEMENTS**

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	81
Consolidated Balance Sheets	82
Consolidated Statements of Comprehensive Loss	83
Consolidated Statements of Stockholders' Equity	84
Consolidated Statements of Cash Flows	86
Notes to Consolidated Financial Statements	87

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 at December 31, 2014 and December 31, 2013, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2014 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, 2014, 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 the accompanying 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 6, 2015

CYTOKINETICS, INCORPORATED
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2014	2013
	(In thousands, except share and per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 20,215	\$ 20,158
Short-term investments	63,013	57,570
Related party accounts receivable	46,646	5
Prepaid and other current assets	1,257	1,605
Total current assets	131,131	79,338
Property and equipment, net	1,637	1,221
Long-term investments	—	2,502
Other assets	200	127
Total assets	<u>\$ 132,968</u>	<u>\$ 83,188</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,361	\$ 3,709
Accrued liabilities	5,400	8,272
Deferred revenue, current	17,042	14,701
Short-term portion of deferred rent	52	22
Total current liabilities	23,855	26,704
Deferred revenue, non-current	16,558	1,500
Long-term portion of deferred rent	491	542
Total liabilities	<u>40,904</u>	<u>28,746</u>
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, 2014 and December 31, 2013	—	—
Common stock, \$0.001 par value:		
Authorized: 81,500,000 shares;		
Issued and outstanding: 38,659,738 shares at December 31, 2014 and 30,681,624 shares at December 31, 2013	39	31
Additional paid-in capital	589,272	537,001
Accumulated other comprehensive income	(4)	7
Accumulated deficit	<u>(497,243)</u>	<u>(482,597)</u>
Total stockholders' equity	92,064	54,442
Total liabilities and stockholders' equity	<u>\$ 132,968</u>	<u>\$ 83,188</u>

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

CYTOKINETICS, INCORPORATED
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Years Ended December 31,		
	2014	2013	2012
	(In thousands, except per share data)		
Revenues:			
Research and development revenues from related parties	\$ 19,538	\$ 2,019	\$ 4,177
Research and development, grant and other revenues	17,566	7,547	3,382
License revenues from related parties	—	17,230	—
License revenues	<u>9,836</u>	<u>3,852</u>	<u>—</u>
Total revenues	<u>46,940</u>	<u>30,648</u>	<u>7,559</u>
Operating expenses:			
Research and development	44,426	49,450	35,643
General and administrative	17,268	15,092	12,429
Restructuring reversals	—	—	(56)
Total operating expenses	<u>61,694</u>	<u>64,542</u>	<u>48,016</u>
Operating loss	(14,754)	(33,894)	(40,457)
Interest and other, net	<u>108</u>	<u>177</u>	<u>87</u>
Loss before income taxes	(14,646)	(33,717)	(40,370)
Income tax benefit	—	—	—
Net loss	(14,646)	(33,717)	(40,370)
Deemed dividend related to beneficial conversion feature of convertible preferred stock	—	—	(1,307)
Net loss allocable to common stockholders	<u>\$(14,646)</u>	<u>\$(33,717)</u>	<u>\$(41,677)</u>
Net loss per share allocable to common stockholders — basic and diluted	<u>\$ (0.41)</u>	<u>\$ (1.24)</u>	<u>\$ (2.30)</u>
Weighted-average number of shares used in computing net loss per share allocable to common stockholders — basic and diluted	<u>35,709</u>	<u>27,275</u>	<u>18,107</u>
Other comprehensive gain (loss):			
Unrealized gains (losses) on available-for-sale securities, net	<u>(11)</u>	<u>(11)</u>	<u>15</u>
Comprehensive loss	<u>\$(14,657)</u>	<u>\$(33,728)</u>	<u>\$(40,355)</u>

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

CYTOKINETICS, INCORPORATED
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Preferred Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
	(In thousands, except share and per share data)							
Balance, December 31, 2011	12,485,957	\$ 13	8,070	\$ —	\$ 456,672	\$ 3	\$ (408,510)	\$ 48,178
Issuance of common stock pursuant to ESPP at a weighted price of \$4.32 per share	15,010	—	—	—	65	—	—	65
Issuance of common stock upon exercise of restricted stock units	144,045	—	—	—	(401)	—	—	(401)
Issuance of common stock pursuant to June 2012 public offerings at \$4.56 per share, net of issuance costs of \$2,139	9,320,176	9	—	—	29,907	—	—	29,916
Issuance of Series B convertible preferred stock pursuant to June 2012 public offerings at \$760 per share, net of issuance costs of \$881	—	—	23,026	—	12,318	—	—	12,318
Issuance of warrants pursuant to June 2012 public offerings, net of issuance costs of \$984	—	—	—	—	13,761	—	—	13,761
Issuance of common stock to MLV at \$6.30-\$7.20 per share, net of commission and issuance costs of \$89	432,724	1	—	—	2,819	—	—	2,820
Conversion of Series A convertible preferred stock to common stock at \$1,000 per share	1,345,000	1	(8,070)	—	(1)	—	—	—
Stock-based compensation	—	—	—	—	3,783	—	—	3,783
Other comprehensive income	—	—	—	—	—	15	—	15
Net loss	—	—	—	—	—	—	(40,370)	(40,370)
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)

CYTOKINETICS, INCORPORATED
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY — (Continued)

	Common Stock		Preferred Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
	(In thousands, except share and per share data)							
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)
Balance, December 31, 2014	<u>38,659,738</u>	<u>\$ 39</u>	<u>—</u>	<u>\$ —</u>	<u>\$ 589,272</u>	<u>\$ (4)</u>	<u>\$ (497,243)</u>	<u>\$ 92,064</u>

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

CYTOKINETICS, INCORPORATED
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2014	2013	2012
	(In thousands)		
Cash flows from operating activities:			
Net loss	\$ (14,646)	\$(33,717)	\$(40,370)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization of property and equipment	490	433	591
Gain on disposal of equipment	—	(79)	(2)
Non-cash restructuring expenses, net of reversals	—	—	(56)
Stock-based compensation	3,330	3,597	3,783
Gain on sale of investments	(6)	—	—
Changes in operating assets and liabilities:			
Related party accounts receivable	(46,641)	—	10
Prepaid and other assets	274	818	(320)
Accounts payable	(2,178)	1,656	690
Accrued and other liabilities	(2,865)	3,523	2,098
Related party payables and accrued liabilities	—	(150)	138
Deferred revenue	17,399	16,201	—
Net cash used in operating activities	<u>(44,843)</u>	<u>(7,718)</u>	<u>(33,438)</u>
Cash flows from investing activities:			
Purchases of investments	(107,043)	(79,434)	(92,788)
Proceeds from sales and maturities of investments	104,098	78,444	63,900
Purchases of property and equipment	(1,104)	(542)	(125)
Proceeds from sales of property and equipment	—	13	2
Decrease in restricted cash	—	—	196
Net cash used in investing activities	<u>(4,049)</u>	<u>(1,519)</u>	<u>(28,815)</u>
Cash flows from financing activities:			
Proceeds from public offerings of common stock, net of issuance costs	48,971	7,450	43,677
Proceeds from draw down of committed equity financing facilities and at-the-market facility, net of commission and issuance costs	—	—	2,820
Payments from stock based award activities and warrants, net	(22)	7,038	(336)
Proceeds from issuance of preferred stock, net of issuance costs	—	—	12,318
Repayment of equipment financing lines	—	—	(152)
Net cash provided by financing activities	<u>48,949</u>	<u>14,488</u>	<u>58,327</u>
Net increase (decrease) in cash and cash equivalents	57	5,251	(3,926)
Cash and cash equivalents, beginning of period	20,158	14,907	18,833
Cash and cash equivalents, end of period	<u>\$ 20,215</u>	<u>\$ 20,158</u>	<u>\$ 14,907</u>

The accompanying notes are an integral part of these 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 clinical 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 \$497.2 million since inception and there can be no assurance that the Company will attain profitability. The Company had a net loss of \$14.6 million and net cash used in operations of \$44.8 million for the year ended December 31, 2014. Cash, cash equivalents and investments increased to \$83.2 million at December 31, 2014 from \$80.2 million at December 31, 2013. 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 clinical 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 obtain regulatory approval for commercialization 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, 2014 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 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 10%, 63% and 55% of total revenues for the years ended December 31, 2014, 2013 and 2012, respectively, were derived from Amgen. Accounts receivable due from Amgen were \$1.6 million and zero at December 31, 2014 and 2013, respectively. See also Note 7, "Related Party Transactions," regarding the collaboration agreement with Amgen. Approximately 69% and 34% of total revenues for the years ended December 31, 2014 and 2013, respectively, were derived from Astellas. Accounts receivable due from Astellas were \$45.0 million and zero at December 31, 2014 and 2013, 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 commercialized 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, 2014, 31% of the Company's revenues were received from entities located in the United States and 69% were

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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. In the year ended December 31, 2012, all of the Company's revenues were received from entities located in the United States or from United States affiliates of foreign corporations.

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, money market funds, U.S. municipal and government agency bonds, and commercial paper. 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.

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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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.

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,

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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. In accordance with ASC 605-25, 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.

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 period of performance as the Company completes its performance obligations.

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.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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.

Retirement Plan

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 2014, employer contributions to the 401(k) plan were \$336,000.

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 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.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Comprehensive Loss

The Company follows the accounting standards for the reporting and presentation of comprehensive income (loss) and its components. On January 1, 2012, the Company adopted new accounting guidance and presents comprehensive income (loss) in a continuous statement of comprehensive income (loss) which replaced the statement of operations. 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, 2014, 2013, and 2012 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.

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.

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.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In July 2013, the FASB issued ASU 2013-11, *Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*. ASU 2013-11 amends accounting guidance on the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or tax credit carryforward exists. This new guidance requires entities, if certain criteria are met, to present an unrecognized tax benefit, or portion of an unrecognized tax benefit, in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward when such items exist in the same taxing jurisdiction. The Company adopted ASU 2013-11 effective January 1, 2014 and the adoption of ASU 2013-11 did not have a material effect on its financial statements.

Accounting Pronouncements Not Yet Adopted

In November 2014, the FASB issued ASU 2014-17, *Business Combinations (Topic 805) — Pushdown Accounting (a consensus of the FASB Emerging Issues Task Force)*. This guidance provides the option for an acquired entity to apply pushdown accounting in its separately issued financial statements when a change-in-control event occurs. This guidance is effective beginning November 18, 2014, and is applicable to change-in-control events occurring after that date or applied to the most recent change-in-control event if financial statements have not yet been issued. The Company does not expect the adoption of ASU 2014-17 to have a material effect upon its financial statements.

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.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which supersedes the revenue recognition requirements in ASC 605, *Revenue Recognition*. ASU 2014-09 stipulates that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for annual and interim reporting periods beginning on or after December 15, 2016, and early adoption is not permitted. ASU 2014-09 permits the use of two transition methods, either retrospectively to each prior reporting period presented or as a cumulative-effect adjustment as of the date of adoption. The Company has not yet selected a transition method, and is currently evaluating the impact of the adoption of ASU 2014-09 on its consolidated financial statements.

In April 2014, the FASB issued ASU 2014-08, *Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*. ASU 2014-08 changes the criteria for determining which disposals can be presented as discontinued operations and modifies related disclosure requirements. This new guidance is effective for the Company beginning January 1, 2015. The Company does not expect the adoption of ASU 2014-08 to have a material effect upon its financial statements.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 2 — Net Loss Per Share

Basic net loss per share allocable to common stockholders is computed by dividing net loss allocable to common stockholders by the weighted average number of vested common shares outstanding during the period. Diluted net income loss per share allocable to common stockholders 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 allocable to common stockholders (in thousands except per share data):

	Years Ended December 31,		
	2014	2013	2012
Net loss	\$(14,646)	\$(33,717)	\$(40,370)
Deemed dividend related to beneficial conversion feature of convertible preferred stock	—	—	(1,307)
Net loss allocable to common stockholders	<u>\$(14,646)</u>	<u>\$(33,717)</u>	<u>\$(41,677)</u>
Weighted-average shares used in computing net loss per share allocable to common stockholders — basic and diluted	<u>35,709</u>	<u>27,275</u>	<u>18,107</u>
Net loss per share allocable to common stockholders — basic and diluted	\$ (0.41)	\$ (1.24)	\$ (2.30)

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

	December 31,		
	2014	2013	2012
Options to purchase common stock	3,298	2,449	1,791
Warrants to purchase common stock	6,691	7,692	9,009
Series B convertible preferred stock (as converted to common stock)	—	—	3,838
Restricted stock units	63	42	217
Shares issuable related to the ESPP	15	14	11
Total shares	<u>10,067</u>	<u>10,197</u>	<u>14,866</u>

Note 3 — Supplementary Cash Flow Data

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

	Years Ended December 31,		
	2014	2013	2012
Cash paid for interest	\$ —	\$ —	\$ 3
Cash paid for income taxes	1	1	1
Significant non-cash investing and financing activities:			
Purchases of property and equipment through accounts payable	170	193	116
Purchases of property and equipment through accrued liabilities	27	(2)	37
Purchases of property and equipment through trade in value of disposed property and equipment	—	81	—

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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, 2014 and 2013 were as follows (in thousands):

	December 31, 2014				Maturity Dates
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	
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
Long-term investments — U.S. Treasury securities	\$ —	\$ —	\$ —	\$ —	

	December 31, 2013				Maturity Dates
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	
Cash equivalents — money market funds	\$15,858	\$ —	\$ —	\$15,858	
Short-term investments — U.S. Treasury securities	\$57,564	\$ 7	\$ (1)	\$57,570	1/2014 — 12/2014
Long-term investments — U.S. Treasury securities	\$ 2,502	\$ —	\$ —	\$ 2,502	1/2015

As of December 31, 2014 and December 31, 2013, the Company's U.S. Treasury securities classified as short-term investments had unrealized losses of approximately \$7 and \$1, respectively. The net unrealized loss at December 31, 2014 was primarily caused by increases in short-term interest rates subsequent to the purchase dates of the related securities. The net unrealized gain at December 31, 2013 was primarily caused by slight decreases in short-term interest rates subsequent to the purchase dates of the related securities. At December 31, 2014 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, 2015 through February 27, 2015 and expects to be able to collect all contractual cash flows on the remaining maturities of its U.S. Treasury securities.

Interest income was as follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
Interest income	\$101	\$96	\$83

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.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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.

Financial assets measured at fair value on a recurring basis as of December 31, 2014 and 2013 are classified in the table below in one of the three categories described above (in thousands):

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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	December 31, 2013			Assets At Fair Value
	Fair Value Measurements Using			
	Level 1	Level 2	Level 3	
Money market funds	\$15,858	\$ —	\$ —	\$ 15,858
U.S. Treasury securities	60,072	—	—	60,072
Total	<u>\$75,930</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 75,930</u>
Amounts included in:				
Cash and cash equivalents	\$15,858	\$ —	\$ —	\$ 15,858
Short-term investments	57,570	—	—	57,570
Long-term investments	2,502	—	—	2,502
Total	<u>\$75,930</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 75,930</u>

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, 2014 and 2013, 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.

Note 6 — Balance Sheet Components

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

	December 31,	
	2014	2013
Property and equipment, net:		
Laboratory equipment	\$ 15,299	\$ 15,317
Computer equipment and software	2,418	2,549
Office equipment, furniture and fixtures	913	1,050
Leasehold improvements	<u>3,334</u>	<u>3,297</u>
	21,964	22,213
Less: Accumulated depreciation and amortization	<u>(20,327)</u>	<u>(20,992)</u>
	<u>\$ 1,637</u>	<u>\$ 1,221</u>

Depreciation expense was \$0.5 million, \$0.4 million and \$0.6 million for the years ended December 31, 2014, 2013 and 2012 respectively.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Accrued liabilities were as follows (in thousands):

	December 31,	
	2014	2013
Accrued liabilities:		
Clinical and preclinical costs	\$ 972	\$4,975
Consulting and professional fees	421	697
Bonus	2,665	1,614
Vacation pay	915	778
Other payroll related	110	93
Other accrued expenses	317	115
	<u>\$5,400</u>	<u>\$8,272</u>

Interest receivable on cash equivalents and investments of \$109,000 and \$215,000 is included in prepaid and other current assets at December 31, 2014 and 2013, 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 I pharmacokinetic study intended to support inclusion of Japan in a potential Phase III 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.

CYTOKINETICS, INCORPORATED**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

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 under ASC 605-10 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.

Under the Amgen Agreement, as amended, the Company is eligible for additional 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, and which could total over \$350.0 million. Additionally, up to \$300.0 million in commercial milestones could be received 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. 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 period ended December 31, 2014, zero dollars were recognized for milestones achieved under the Amgen Agreement.

The Amgen Agreement also provides for the Company to receive increased royalties by co-funding Phase III 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.

Revenue from Amgen was as follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
License revenues from related parties	\$ —	\$17,230	\$ —
Research and development revenues from related parties:			
Reimbursement of internal costs	4,260	2,019	4,174
Reimbursement of other costs	—	—	3
Allocated consideration	278	—	—
Total revenues from Amgen	<u>\$4,538</u>	<u>\$19,249</u>	<u>\$4,177</u>

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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 I clinical trials and certain Phase II 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 approximately \$25.5 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 year ended December 31, 2014, the Company recorded \$9.8 million in license revenue based on the proportional performance model. As of December 31, 2014, the Company has recognized \$13.7 million of the \$16.0 million upfront license fee as license revenue, and has \$2.3 million of deferred license revenue 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 year ended December 31, 2014, the Company recorded research and development revenue from Astellas of \$8.9 million related to the reimbursement of internal costs and \$6.5 million related to the reimbursement of other costs.

Amended Astellas Agreement (Expansion to include neuromuscular indications)

On December 22, 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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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, in addition to the non-neuromuscular indications provided for in the Original Astellas Agreement. Under the terms of 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 II clinical development. The Company is also eligible to potentially receive over \$20.0 million in reimbursement of sponsored research and development activities during the next two years of the collaboration. Under the Amended Astellas Agreement, the Company plans to conduct the initial Phase II 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-alone value. Accordingly, the Company is recognizing this revenue over the initial research term of the Amended Astellas Agreement using the proportional performance model. As of December 31, 2014, the Company has recognized zero of the \$30.0 million upfront license fee as license revenue and deferred the entire amount.

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 period ended December 31, 2014, \$17.0 million was recognized as milestone revenue for early development under this agreement. 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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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 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, 2014	Year Ended December 31, 2013
Research and development revenues with related parties:		
Research and development milestone fees	\$ 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	<u>\$ 32,391</u>	<u>\$ 6,415</u>

At December 31, 2014, the Company had \$33.6 million of deferred revenue under the Amended Astellas Agreement, reflecting the unrecognized portion of the license revenue and prepayment on expenses expected to be incurred in the first quarter of 2015.

Note 8 — Other Research and Development Revenue Arrangements

Grants

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.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Total grant revenues were as follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
NINDS myasthenia gravis	\$—	\$69	\$1,308
Other grant revenue	75	25	—
Total grant revenue	<u>\$75</u>	<u>\$94</u>	<u>\$1,308</u>

Global Blood Therapeutics, Inc. (“Global Blood”)

In October 2011, the Company entered into a collaboration agreement with Global Blood Therapeutics, Inc. (formerly called Global Blood Targeting, Inc.) (“Global Blood”). Under an agreed research plan, scientists from Global Blood and our FTEs conducted research focused on small molecule therapeutics that target the blood. The Company provided to Global Blood access to certain research facilities, FTEs and other resources at agreed reimbursement rates that approximated our costs. In April 2012, the Company extended this agreement through December 2012. The Company was the primary obligor in the collaboration arrangement, and accordingly, the Company recorded expense reimbursements from Global Blood as research and development revenue.

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

	Years Ended December 31,		
	2014	2013	2012
Expense reimbursements from Global Blood	<u>\$—</u>	<u>\$ 14</u>	<u>\$ 1,479</u>

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,		
	2014	2013	2012
Research and development milestone fees	\$100	\$ —	\$ —
Expense reimbursements from MyoKardia	—	1,024	595
Research and development revenue from Myokardia	<u>\$100</u>	<u>\$1,024</u>	<u>\$595</u>

Note 9 — Debt

In April 2006, the Company entered into an equipment financing agreement with GE Capital. As of December 31, 2011, the balance of equipment loans outstanding under this line was \$152,000. The Company

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

repaid the remaining outstanding equipment financing debt in March 2012 and no further funds are available under this line of credit.

Interest Expense

Total interest expense incurred by the Company was as follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
Interest expense	\$ —	\$ —	\$ 3

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,		
	2014	2013	2012
Rent expense	\$3,338	\$3,306	\$3,375

As of December 31, 2014, future minimum lease payments under noncancelable operating leases were as follows (in thousands):

2015	\$ 3,390
2016	3,504
2017	3,626
2018	1,860
2019	—
Thereafter	—
Total	\$12,380

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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

As of December 31, 2010 there were 10,000,000 shares of preferred stock authorized and no shares outstanding.

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 of Series B Preferred Stock were not entitled to receive any dividends, unless and until specifically declared by

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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, 2014 there were 10,000,000 shares of preferred stock authorized and no shares outstanding.

Note 12 — Stockholders' Equity

Accumulated Other Comprehensive Loss

In 2014, the Company reclassified insignificant amounts of unrealized gains (losses) in investments out of accumulated other comprehensive income into net loss.

Authorized Shares

On May 18, 2011, the stockholders approved an increase in the number of authorized shares of common stock from 170,000,000 to 245,000,000. The increase became effective in August 2011, when the Company filed the Certificate of Amendment of Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware. 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

On April 20, 2011, pursuant to the Deerfield Agreement, the Company issued to Deerfield (i) 883,333 shares of common stock for a purchase price of \$9.00 per share, (ii) 8,070 shares of Series A Preferred Stock for a purchase price of \$1,500.00 per share, and (iii) 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 \$20.1 million. After issuance costs of approximately \$0.2 million, the net proceeds were approximately \$19.9 million.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The offering was made pursuant to a shelf registration statement that the Company filed with the SEC on November 10, 2008, which became effective on November 19, 2008 (File No. 333-155259). The closing of the offering took place on April 20, 2011.

In accordance with the accounting guidance for valuing stock and warrants when preferred stock, common stock and warrants are issued in a single transaction and all are to be accounted for as equity, the Company allocated the gross purchase proceeds using the relative fair value method. The fair value of the common stock issued to Deerfield was calculated based on the closing price of the stock on the commitment date as quoted on The NASDAQ Global Market. The Series A Preferred Stock was valued based on the fair value of the Company's common stock on the commitment date times the conversion ratio of one share of preferred to one thousand shares of common stock. The fair value of the Series A Preferred Stock was determined to be essentially equivalent to the fair value of the common stock into which it is convertible, based on the preferred holders' ability to immediately convert the Series A Preferred Stock to common stock and the fact that the liquidation preference of the Series A Preferred Stock is only \$0.001 per share. The fair value of the warrants was determined using the Black-Scholes pricing model, as discussed above. The relative fair value ratio of each of the instruments issued was then applied to the total gross proceeds of \$20.1 million, resulting in allocated purchase prices of \$6.2 million for the common stock, \$9.4 million for the Series A Preferred Stock and \$4.5 million for the warrants.

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

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.

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.

The offerings were made pursuant to a shelf registration statement that the Company 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 the Company filed with the SEC on June 20, 2012, which became effective on June 20, 2012 (File No. 333-182226). The closing of the offerings took place on June 25, 2012.

In accordance with the accounting guidance for valuing stock and warrants when stock is issued in conjunction with other securities, and the stock and other securities are to be accounted for as equity, the Company allocated the gross purchase proceeds using the relative fair value method. For accounting purposes, the June 2012 Public Offerings were considered to be one transaction. The fair value of the common stock issued in the June 2012 Public Offerings was calculated based on the closing price of the stock on the commitment date as quoted on The NASDAQ Global Market. The Series B Preferred Stock was valued based on the fair value of the Company's common stock on the commitment date times the conversion ratio of one share of preferred stock to one thousand shares of common stock. The fair value of the Series B Preferred Stock was determined to be

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

essentially equivalent to the fair value of the common stock into which it is convertible, based on the preferred holders' ability to immediately convert the Series B Preferred Stock to common stock and the fact that the liquidation preference of the Series B Preferred Stock is only \$0.001 per share. The fair value of the warrants was determined using the Black-Scholes pricing model, as discussed above. The relative fair value ratio of each of the instruments issued was then applied to the total gross proceeds of \$60.0 million, resulting in allocated purchase prices of \$32.1 million for the common stock, \$13.2 million for the Series B Preferred Stock, and \$14.7 million for the warrants.

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.

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 became exercisable on October 20, 2011 and will remain exercisable until April 20, 2015. 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 \$5.8 million using the Black-Scholes option pricing model and the following assumptions: a contractual term of four years, a risk-free interest rate of 1.66%, volatility of 80%, and the fair value of the Company's common stock on the issuance date of \$9.12 (\$1.52 before adjustment for the Company's 2013 reverse stock split, see Note 1).

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 (\$0.63 before adjustment for the Company's 2013 reverse stock split, see Note 1).

CYTOKINETICS, INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In February 2013, warrants to purchase 1,000 shares of the Company's common stock at an exercise price of \$5.28 per share were cash exercised in accordance with the June 2012 Public Offerings underwriting agreements.

In April 2013, the Company issued 358,460 shares of common stock related to cashless exercises of warrants in accordance with the June 2012 Public Offerings.

Outstanding warrants as of December 31, 2014 were as follows:

	<u>Number of Shares</u>	<u>Exercise Price</u>	<u>Expiration Date</u>
Issued 4/20/2011	1,114,168	\$ 9.90	04/20/15
Issued 6/25/2012	5,576,928	\$ 5.28	06/25/17

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 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. As of December 31, 2014, there were 1,270,478 shares of common stock reserved for issuance under the 2004 Plan.

1997 Plan

In 1997, the Company adopted the 1997 Stock Option/Stock Issuance Plan (the "1997 Plan"). The Plan provides for the granting of stock options to employees and consultants of the Company. Options granted under the 1997 Plan may be either incentive stock options or nonstatutory stock options. Incentive stock options may be granted only to Company employees (including officers and directors who are also employees). Nonstatutory stock options may be granted to Company employees and consultants. Options under the Plan may be granted for terms of up to ten years from the date of grant as determined by the Board of Directors, provided, however, that (i) the exercise price of an incentive stock option and nonstatutory stock option shall not be less than 100% and 85% of the estimated fair market value of the shares on the date of grant, respectively, and (ii) with respect to any 10% stockholder, the exercise price of an incentive stock option or nonstatutory stock option shall not be less than 110% of the estimated fair market value of the shares on the date of grant and the term of the grant shall not exceed five years. Options may be exercisable immediately and are subject to repurchase options held by the Company which lapse over a maximum period of ten years at such times and under such conditions as determined by the Board of Directors. Options granted under the 1997 Plan generally vested over four or five years (generally 25% after one year and monthly thereafter). As of December 31, 2014, the Company had reserved no shares of common stock for issuance related to options outstanding under the 1997 Plan, and there were no shares available for future grants under the 1997 Plan.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Activity under the two stock option plans 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, 2011	585,476	1,598,408	21.93		
Increase in authorized shares	416,667	—	—		
Options granted	(403,108)	403,108	6.14		
Options forfeited/expired	210,989	(210,989)	17.00		
Restricted stock units forfeited	68,702	—	—		
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	<u>1,270,478</u>	<u>3,297,826</u>	\$ 12.62	6.79	\$ 2,657
Exercisable at December 31, 2014		2,140,754	\$ 15.17	5.76	\$ 1,553
Vested and expected to vest as of December 31, 2014		3,277,489	\$ 12.64	6.78	\$ 2,642

Total intrinsic value of stock options exercised was \$1,000, \$107,000, and zero during the years ended December 31, 2014, 2013 and 2012, respectively. The intrinsic value is calculated as the difference between the market value as of December 31, 2014 and the exercise price of shares. The market value as of December 31, 2014 was \$8.01 per share as reported by NASDAQ. The weighted average grant date fair value of stock options granted was \$6.01, \$3.85 and \$3.89 per share during the years ended December 31, 2014, 2013 and 2012, respectively.

The number of option shares vested was 601,647, 457,465 and 348,693 in 2014, 2013 and 2012, respectively. The grant date fair value of option shares vested was \$3.0 million, \$2.3 million and \$2.4 million in 2014, 2013 and 2012, respectively. The Company has revised the previously reported disclosures of option shares vested and grant date fair value of option shares vested for the years ended December 31, 2013 and December 31, 2012. The corrections had no effect upon the statements of comprehensive loss amounts.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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, 2011	517,535	\$ 6.78
Restricted stock units vested	(231,935)	6.78
Restricted stock units forfeited	(68,702)	6.78
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	<u>63,330</u>	\$ 8.51

The grant date fair value of restricted stock units vested during the years ended December 31, 2014, 2013 and 2012 was \$0.1 million, \$1.4 million and \$1.6 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.

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,		
	2014	2013	2012
Research and development	\$1,361	\$1,538	\$1,801
General and administrative	1,969	2,059	1,982
Stock-based compensation included in operating expenses	<u>\$3,330</u>	<u>\$3,597</u>	<u>\$3,783</u>

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.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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, 2014		Year Ended December 31, 2013		Year Ended December 31, 2012	
	Employee		Employee		Employee	
	Stock Options	ESPP	Stock Options	ESPP	Stock Options	ESPP
Risk-free interest rate	1.9%	0.2%	1.1%	0.2%	1.1%	0.2%
Volatility	77.1%	86.0%	73.2%	74.6%	71.1%	72.0%
Expected term in years	6.30	1.25	6.20	1.25	6.13	1.25
Expected dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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, 2014, there was \$5.7 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted-average period of 2.52 years and \$0.3 million of unrecognized compensation cost related to unvested restricted stock units, which is expected to be recognized over a weighted-average period of 0.83 years.

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, 2014, 2013 or 2012. 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 \$50,000, \$104,000, and \$56,000 in 2014, 2013 and 2012, respectively.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

ESPP

In January 2004, the Board of Directors adopted the ESPP, which was approved by the stockholders in February 2004. Under the 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 Company issued 19,726, 14,985 and 15,010 shares of common stock during 2014, 2013 and 2012, respectively, pursuant to the ESPP at an average price of \$3.38, \$3.66 and \$4.32 per share, in 2014, 2013 and 2012, respectively. At December 31, 2014 the Company had 170,170 shares of common stock reserved for issuance under the 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, 2014, 2013, or 2012 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,		
	2014	2013	2012
United States	\$(14,646)	\$(33,717)	\$(40,370)
Foreign	—	—	—
Total	<u>\$(14,646)</u>	<u>\$(33,717)</u>	<u>\$(40,370)</u>

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

	Years Ended December 31,		
	2014	2013	2012
Current:			
Federal	\$—	\$—	\$—
State	—	—	—
Total	<u>\$—</u>	<u>\$—</u>	<u>\$—</u>
Deferred:			
Federal	\$—	\$—	\$—
State	—	—	—
Total	<u>\$—</u>	<u>\$—</u>	<u>\$—</u>

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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,		
	2014	2013	2012
Deferred tax assets:			
Depreciation and amortization	\$ 780	\$ 918	\$ 1,024
Capitalized R&D	15,176	20,702	4,932
Reserves and accruals	6,217	4,946	5,101
Net operating losses	148,184	144,254	153,193
Tax credits	34,543	33,043	25,943
Total deferred tax assets	204,900	203,863	190,193
Less: Valuation allowance	(204,900)	(203,863)	(190,193)
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

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 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, 2014, 2013 and 2012. 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 \$1.0 million in 2014, \$13.7 million in 2013 and \$21.1 million in 2012.

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, 2014, 2013 and 2012 that arose directly from tax deductions related to equity compensation in excess of compensation recognized for financial reporting. Approximately \$1.9 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, 2012:					
Deferred tax valuation allowance	\$ 169,107	\$ 21,086	—	—	\$ 190,193
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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

	Years Ended		
	December 31,		
	2014	2013	2012
Tax at federal statutory tax rate	(34)%	(34)%	(34)%
State income tax, net of federal tax benefit	(1)%	(4)%	(6)%
State Apportionment	28%	7%	0%
Tax credits (net)	(7)%	(14)%	(19)%
Deferred tax assets (utilized) not benefited	7%	41%	56%
Stock-based compensation	5%	2%	0%
NOL Expiration	2%	1%	2%
Other	0%	1%	1%
Total	<u>0%</u>	<u>0%</u>	<u>0%</u>

The Company had federal net operating loss carryforwards of approximately \$386.8 million and apportioned state net operating loss carryforwards of approximately \$285.7 million before federal benefit at December 31, 2014. If not utilized, the federal and state operating loss carryforwards will begin to expire in various amounts beginning 2020 and 2015, respectively. The net operating loss carryforwards include deductions for stock options.

The Company had general business credit of approximately \$30.8 million and \$13.3 million for federal and state income tax purposes, respectively, at December 31, 2014. 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. As a result of agreements in place in 2013, the Company adjusted deferred tax assets to reflect these changes.

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, 2014 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 2012 and 2013 tax returns after completing a reverse stock split in the second quarter of 2013. For 2014, the Company anticipates foregoing the election in its 2014 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

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

expected to be taken on a tax return. Tax positions are initially recognized in the financial statements when it is 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 is a tabular reconciliation of the total amounts of unrecognized tax benefits ("UTBs") (in thousands):

	Federal and State Tax	Federal Tax Benefit of State Income Tax UTBs	Unrecognized Income Tax Benefits - Net of Federal Benefit of State UTBs
Unrecognized tax benefits balance at December 31, 2012	\$ 5,340	\$ 1,158	\$ 4,182
Addition for tax positions of prior years	24	8	16
Addition for tax positions related to the current year	807	43	764
Unrecognized tax benefits balance at December 31, 2013	6,171	1,209	4,962
Reductions for tax positions of prior years	(85)	(29)	(56)
Addition for tax positions related to the current year	188	10	178
Unrecognized tax benefits balance at December 31, 2014	<u>\$ 6,274</u>	<u>\$ 1,190</u>	<u>\$ 5,084</u>

Included in the balance of unrecognized tax benefits as of December 31, 2014, 2013 and 2012 are \$5.1 million, \$5.0 million and \$4.2 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 2014, 2013 or 2012. The Company does not expect its unrecognized tax benefit to change materially over the next twelve months.

CYTOKINETICS, INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 14 — Interest and Other, Net

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

	Years Ended December 31,		
	2014	2013	2012
Interest income and other income	\$108	\$ 98	\$89
Interest expense and other expense	—	79	(2)
Interest and Other, net	<u>\$108</u>	<u>\$177</u>	<u>\$87</u>

Interest income and other income in all periods primarily consisted of interest income generated from the Company's cash, cash equivalents and investments.

Interest expense and other expense in 2013 consisted solely of net gains realized upon disposal of equipment. Interest expense and other expense in 2012 primarily consisted of interest expense on borrowings under equipment financing lines.

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
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) allocable to common stockholders	(8,744)	(8,374)	(5,971)	8,443
Net income (loss) per share allocable to common stockholders — basic and diluted	\$ (0.27)	\$ (0.23)	\$ (0.16)	\$ 0.23
2013				
Total revenues	\$ 821	\$ 1,009	\$ 4,469	\$24,349
Net income (loss)	(12,619)	(15,041)	(12,588)	6,531
Net income (loss) allocable to common stockholders	(12,619)	(15,041)	(12,588)	6,531
Net income (loss) per share allocable to common stockholders — basic	\$ (0.53)	\$ (0.58)	\$ (0.43)	\$ 0.22
Net income (loss) per share allocable to common stockholders — diluted	\$ (0.53)	\$ (0.58)	\$ (0.43)	\$ 0.21

[Table of Contents](#)

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.

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, 2014. 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, 2014, 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, 2014, 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, 2014 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 2015 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, 2014:

<u>Plan Category</u>	<u>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</u>	<u>Weighted Average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans</u>
Equity compensation plans approved by stockholders	2,139,534	\$ 15.17	1,440,648(1)
Equity compensation plans not approved by stockholders	—	—	—
Total	<u>2,139,534</u>	<u>\$ 15.17</u>	<u>1,440,648</u>

(1) Includes 170,170 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:

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
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	January 27, 2004	3.2	
3.5	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock.	8-K	000-50633	April 18, 2011	4.5	
3.6	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock.	8-K	000-50633	June 20, 2012	4.1	
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	

Table of Contents

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
4.3	Form of Warrant to Purchase Common Stock of Cytokinetics, Inc.	8-K	000-50633	April 18, 2011	10.68	
4.4	Form of Common Stock Warrant Agreement	S-3	333-178189	November 25, 2011	4.4	
4.5	Form of Preferred Stock Warrant Agreement	S-3	333-178189	November 25, 2011	4.5	
4.6	Form of Warrant	10-Q	000-50633	August 6, 2012	4.6	
4.7	Form of Common Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.4	
4.8	Form of Preferred Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.5	
10.1	1997 Stock Option/Stock Issuance Plan	S-1	333-112261	January 27, 2004	10.2	
10.2	2004 Equity Incentive Plan, as amended	10-Q	000-50633	August 7, 2013	10.2	
10.3	2004 Employee Stock Purchase Plan	10-Q	000-50633	August 7, 2013	10.3	
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	

Table of Contents

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		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
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	Common Stock Purchase Agreement, dated October 15, 2007, by and between the Company and Kingsbridge Capital Limited.	8-K	000-50633	October 15, 2007	10.66	
10.17	Form of Indemnification Agreement between the Company and each of its directors and executive officers.	10-Q	000-50633	August 5, 2008	10.1	
*10.18	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	

Table of Contents

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
10.19	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	
10.20	Form of Executive Employment Agreement between the Company and its executive officers.	10-Q	000-50633	August 5, 2008	10.68	
*10.21	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	
*10.22	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	
*10.23	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	
*10.24	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	
10.25	Form of Amendment No. 1 to Amended and Restated Executive Employment Agreements.	10-K	000-50633	March 12, 2009	10.68	
10.26	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	
*10.27	Amendment No. 5, dated November 1, 2011, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 11, 2011	10.66	

Table of Contents

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
10.28	Securities Purchase Agreement, dated April 18, 2011, between the Company and 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.	8-K	000-50633	April 18, 2011	10.67	
10.29	At the Market Issuance Sales Agreement, dated June 10, 2011, between the Company and McNicoll, Lewis & Vlak LLC.	8-K	000-50633	June 13, 2011	10.68	
*10.30	Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011.	10-K	000-50633	March 13, 2012	10.42	
*10.31	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	
*10.32	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	
10.33	Compensation Information for the Company's Named Executive Officers.	8-K	000-50633	March 2, 2015	10.1	
10.34	Form of Option Agreement.	10-K	000-50633	March 15, 2013	10.46	
10.35	Form of Restricted Stock Unit Award Agreement.	10-K	000-50633	March 15, 2013	10.47	
10.36	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	
*10.37	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	
10.38	Form of Executive Employment Agreement between the Company and its executive officers.	10-K	000-50633	March 7, 2014	10.39	
10.39	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	

Table of Contents

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		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>	
*10.40	Amended and Restated License and Collaboration Agreement, dated December 22, 2014, by and between the Company and Astellas Pharma Inc.				X
23.1	Consent of Independent registered public accounting firm.				X
24.1	Power of Attorney (included in the signature page to this report).				
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).				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

* Pursuant to a request for confidential treatment, portions of this Exhibit have been redacted from the publicly filed document and have been furnished separately to the Securities and Exchange Commission as required by Rule 406 under the Securities Act or Rule 24b-2 under the Exchange Act, as applicable.

(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.

[Table of Contents](#)

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 6, 2015

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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ ROBERT I. BLUM</u> Robert I. Blum	President, Chief Executive Officer and Director (Principal Executive Officer)	March 6, 2015
<u>/s/ SHARON A. BARBARI</u> Sharon A. Barbari	Executive Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Executive)	March 6, 2015
<u>/s/ L. PATRICK GAGE, PH.D.</u> L. Patrick Gage, Ph.D.	Chairman of the Board of Directors	March 6, 2015
<u>/s/ SANTO J. COSTA</u> Santo J. Costa	Director	March 6, 2015
<u>/s/ DENISE M. GILBERT, PH.D.</u> Denise M. Gilbert, Ph.D.	Director	March 6, 2015
<u>/s/ JOHN T. HENDERSON, M.B. CH.B.</u> John T. Henderson, M.B. Ch.B.	Director	March 6, 2015
<u>/s/ B. LYNNE PARSHALL, ESQ.</u> B. Lynne Parshall, Esq.	Director	March 6, 2015
<u>/s/ SANDFORD D. SMITH</u> Sandford D. Smith	Director	March 6, 2015
<u>/s/ WENDELL WIERENGA, PH.D.</u> Wendell Wierenga, Ph.D.	Director	March 6, 2015

Table of Contents

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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	January 27, 2004	3.2	
3.5	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock.	8-K	000-50633	April 18, 2011	4.5	
3.6	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock.	8-K	000-50633	June 20, 2012	4.1	
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 to Purchase Common Stock of Cytokinetics, Inc.	8-K	000-50633	April 18, 2011	10.68	
4.4	Form of Common Stock Warrant Agreement	S-3	333-178189	November 25, 2011	4.4	
4.5	Form of Preferred Stock Warrant Agreement	S-3	333-178189	November 25, 2011	4.5	
4.6	Form of Warrant	10-Q	000-50633	August 6, 2012	4.6	
4.7	Form of Common Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.4	
4.8	Form of Preferred Stock Warrant and Warrant Certificate	S-3	333-192125	November 6, 2013	4.5	
10.1	1997 Stock Option/Stock Issuance Plan	S-1	333-112261	January 27, 2004	10.2	
10.2	2004 Equity Incentive Plan, as amended	10-Q	000-50633	August 7, 2013	10.2	
10.3	2004 Employee Stock Purchase Plan	10-Q	000-50633	August 7, 2013	10.3	

Table of Contents

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
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	January 27, 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	
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	

Table of Contents

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
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	Common Stock Purchase Agreement, dated October 15, 2007, by and between the Company and Kingsbridge Capital Limited.	8-K	000-50633	October 15, 2007	10.66	
10.17	Form of Indemnification Agreement between the Company and each of its directors and executive officers.	10-Q	000-50633	August 5, 2008	10.1	
*10.18	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	
10.19	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	
10.20	Form of Executive Employment Agreement between the Company and its executive officers.	10-Q	000-50633	August 5, 2008	10.68	
*10.21	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	
*10.22	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	
*10.23	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	

Table of Contents

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
*10.24	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	
10.25	Form of Amendment No. 1 to Amended and Restated Executive Employment Agreements.	10-K	000-50633	March 12, 2009	10.68	
10.26	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	
*10.27	Amendment No. 5, dated November 1, 2011, to the Collaboration and Option Agreement by and between the Company and Amgen Inc.	10-K	000-50633	March 11, 2011	10.66	
10.28	Securities Purchase Agreement, dated April 18, 2011, between the Company and 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.	8-K	000-50633	April 18, 2011	10.67	
10.29	At the Market Issuance Sales Agreement, dated June 10, 2011, between the Company and McNicoll, Lewis & Vlak LLC.	8-K	000-50633	June 13, 2011	10.68	
*10.30	Consulting Agreement between the Company and David J. Morgans, dated November 1, 2011.	10-K	000-50633	March 13, 2012	10.42	
*10.31	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	
*10.32	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	
10.33	Compensation Information for the Company's Named Executive Officers.	8-K	000-50633	March 2, 2015	10.1	

[Table of Contents](#)

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
10.34	Form of Option Agreement.	10-K	000-50633	March 15, 2013	10.46	
10.35	Form of Restricted Stock Unit Award Agreement.	10-K	000-50633	March 15, 2013	10.47	
10.36	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	
*10.37	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	
10.38	Form of Executive Employment Agreement between the Company and its executive officers.	10-K	000-50633	March 7, 2014	10.39	
10.39	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	
*10.40	Amended and Restated License and Collaboration Agreement, dated December 22, 2014, by and between the Company and Astellas Pharma Inc.					X
23.1	Consent of Independent registered public accounting firm.					X
24.1	Power of Attorney (included in the signature page to this report).					
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).					X
101.INS	XBRL Instance Document.					X

[Table of Contents](#)

<u>Exhibit No.</u>	<u>Exhibits</u>	<u>Incorporated by Reference</u>			<u>Exh. No.</u>	<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Filing Date</u>		
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

* Pursuant to a request for confidential treatment, portions of this Exhibit have been redacted from the publicly filed document and have been furnished separately to the Securities and Exchange Commission as required by Rule 406 under the Securities Act or Rule 24b-2 under the Exchange Act, as applicable.

(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.

Amended and Restated
License and Collaboration Agreement
by and between
Cytokinetics, Inc.
and
Astellas Pharma Inc.

[*] = 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 406 of the Securities Act of 1933, as amended.

AMENDED AND RESTATED LICENSE AND COLLABORATION AGREEMENT

This AMENDED AND RESTATED LICENSE AND COLLABORATION AGREEMENT (this “**Agreement**”) is made as of December 22, 2014 (the “**Amendment Effective Date**”), by and between **Cytokinetics, Inc.**, a corporation organized and existing under the laws of Delaware, having its principal place of business at 280 East Grand Avenue, South San Francisco, CA 94080, USA (“**Cytokinetics**”), and **Astellas Pharma Inc.**, a corporation organized and existing under the laws of Japan, having its registered office at 2-5-1, Nihonbashi-Honcho, Chuo-ku, Tokyo 103-8411, Japan (“**Astellas**”). Astellas and Cytokinetics are referred to in this Agreement individually as a “**Party**” and collectively as the “**Parties**.”

RECITALS

WHEREAS, Cytokinetics is a biopharmaceutical company directed to the research and development of small molecule compounds that modulate muscle function, and owns certain patents and know-how relating to skeletal sarcomere activators;

WHEREAS, Astellas is a pharmaceutical company working to create and develop novel therapies;

WHEREAS, Cytokinetics has conducted and continues to conduct research activities (including biochemistry, cellular characterization, chemistry and pharmacology) directed to the discovery of small molecules that activate the skeletal muscle sarcomere and early stage development relating thereto;

WHEREAS, Astellas has conducted [*]

WHEREAS, Cytokinetics and Astellas are parties to a License and Collaboration Agreement, dated June 21, 2013 (the “**Effective Date**”), as previously amended (the “**Existing Agreement**”), pursuant to which they established a collaboration for the research and development and, if successful, commercialization of pharmaceutical products that contain certain fast skeletal [*] activators (except for Cytokinetics’ clinical development candidate *tirasemtiv* and related molecules) and certain other skeletal sarcomere activators, all under the terms and conditions set forth therein;

WHEREAS, Cytokinetics has [*];

WHEREAS, the Existing Agreement provides for the collaborative research, development and commercialization of [*] Activators in the Licensed Indications, and the Parties now desire to expand the scope of collaboration for [*] Activators to include certain neuromuscular indications and to amend and restate the Existing Agreement;

WHEREAS, Cytokinetics will retain the right to products that contain *tirasemtiv* and related molecules, and will develop and, if successful, commercialize such products outside the scope of this Agreement.

[*] = **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 406 of the Securities Act of 1933, as amended.**

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, Astellas and Cytokinetics hereby agree as follows:

ARTICLE 1 DEFINITIONS

The terms in this Agreement with initial letters capitalized shall have the meanings set forth below, or the meaning as designated in the indicated places throughout this Agreement.

1.1 “Active Ingredient” means the clinically active material(s) that provide pharmacological activity in a pharmaceutical product (excluding formulation components such as coatings, stabilizers, excipients or solvents, adjuvants or controlled release technologies).

1.2 “[*] Indications” means, for [*] Activators, (a) [*] pursuant to Section [*], and (b) any [*] Indication(s) [*] pursuant to Section [*].

1.3 “[*] Indication” means: (a) as of the Amendment Effective Date, any of the Indications set forth on Exhibit L; and (b) any other [*] Indication that may be added to Exhibit L as [*] Indication during the Term by written agreement of the Parties.

1.4 “Affiliate” means, with respect to a Party, any Person that controls, is controlled by, or is under common control with that Party. For the purpose of this definition only, “control” (including, with correlative meaning, the terms “controlled by” and “under the common control”) means the actual power, either directly or indirectly through one or more intermediaries, to direct or cause the direction of the management and policies of such Person, whether by the ownership of more than fifty percent (50%) of the voting stocking of such Person, by contract or otherwise.

1.5 “[*]” means [*].

1.6 “Astellas Know-How” means all Know-How that is (a) Controlled by Astellas or its Affiliates during the Term and (b) reasonably necessary or useful for the Research, Development, Manufacture, Commercialization or Medical Affairs Activities of any Compound and/or Collaboration Product, provided, however, that Astellas Know-How specifically excludes Collaboration Know-How.

1.7 “Astellas Patents” means any Patent Right that is (a) Controlled by Astellas or its Affiliates during the Term and (b) reasonably necessary or useful for the Research, Development, Manufacture, Commercialization or Medical Affairs Activities of any Compound and/or Collaboration Product, provided, however, that Astellas Patents specifically exclude Collaboration Patents. The Astellas Patents existing as of the Effective Date are listed in Exhibit A.

1.8 “Astellas Technology” means Astellas Know-How and Astellas Patents.

[*] = **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 406 of the Securities Act of 1933, as amended.**

1.9 “Astellas Territory” means worldwide other than the Shared Territory.

1.10 “Business Day” means a day other than a Saturday, Sunday or a day that is a statutory holiday in Japan or a bank holiday in New York, USA.

1.11 “Claims” means all Third Party demands, claims, actions, proceedings and liability (whether criminal or civil, in contract, tort or otherwise) for losses, damages, reasonable legal costs and other reasonable expenses of any nature.

1.12 “CMC Activities” means the chemistry, manufacturing, control and other activities necessary or useful for generating the CMC Information required for Marketing Approval of the Collaboration Products, including Manufacture of validation and/or clinical trial materials, which are necessary or useful to obtain Marketing Approval of the Collaboration Products.

1.13 “CMC Information” means information related to the chemistry, manufacturing and controls of a Compound or a Collaboration Product, as specified by FDA, EMA or other applicable Regulatory Authority.

1.14 “Collaboration” means the collaboration of the Parties with respect to the Research, Development, Manufacture, Commercialization and Medical Affairs Activities of the Compounds and Collaboration Products in the Collaboration Indications (for [*] Activators) or the Field (for [*] Activators), as and to the extent set forth in this Agreement.

1.15 “Collaboration Intellectual Property” means any information and materials, including discoveries, improvements, modifications, processes, methods, assay, designs, protocols, formulas, data, inventions, algorithms, forecasts, profiles, strategies, plans, results, coordinates for compound/apo protein structures, expression constructs, know-how and trade secrets, patentable or otherwise, that is discovered, generated, conceived and/or reduced to practice by or on behalf either Party (including its Affiliates, employees, agents and contractors), whether solely or jointly, as a result of: (a) the performance of its activities under the Research Plan and/or (b) the performance of its activities under the Development Plan [*], in each case including all rights, title and interest in and to the intellectual property rights therein and thereto.

1.16 “Collaboration Indications” means (a) Licensed Indications [*]; (b) [*] Indications; and (c) any [*] Indications.

1.17 “Collaboration Know-How” means Know-How that is within the Collaboration Intellectual Property.

[*] = **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 406 of the Securities Act of 1933, as amended.**

1.18 “Collaboration Patents” means Patent Rights that claim any Collaboration Intellectual Property, provided that any Patent Rights [*] Collaboration Patents.

1.19 “Collaboration Product” means any pharmaceutical product containing a Compound, alone or in combination with other Active Ingredients, in any formulation or dosage form and for any mode of administration.

1.20 “Commercialize” or “Commercialization” means all activities directed to marketing, promoting, advertising, exhibiting, distributing (including management of wholesalers), detailing or selling a Collaboration Product in the Field (including importing and exporting activities in connection therewith). For the avoidance of doubt, Commercialization does not include Medical Affairs Activities.

1.21 “Committee” means the JSC, JRC, JDC, JMC, JCC, JMAC, [*] or JPC, as applicable.

1.22 “Compound” means any [*] Activator or [*] Activator.

1.23 “Compound Criteria” means the criteria listed in **Exhibit B** for each of [*] Activators, [*] Activators and [*] Activators.

1.24 “Confidential Information” of a Party means all Know-How, unpublished patent applications and other non-public information and data of a financial, commercial, business, operational or technical nature of such Party that is disclosed by or on behalf of such Party or any of its Affiliates or otherwise made available to the other Party or any of its Affiliates, in each case in connection with this Agreement, whether made available orally, visually, in writing or in electronic form. To the extent that Cytokinetics discloses to Astellas and/or its Affiliates any information relating to any [*] (such disclosure to be made at Cytokinetics’ sole discretion), such information shall also be deemed Confidential Information. Collaboration Intellectual Property shall be deemed Confidential Information of both Parties.

1.25 “Control” or “Controlled” means, with respect to any Know-How, Patent Rights or other intellectual property rights, that a Party has the legal authority or right (whether by ownership, license or otherwise) to grant a license, sublicense, access or right to use (as applicable) under such Know-How, Patent Rights, or other intellectual property rights to the other Party on the terms and conditions set forth herein, in each case without breaching the terms of any agreement with a Third Party.

1.26 “Co-Promote” and “Co-Promotion” means the promotional activities relating to the Collaboration Products directed to healthcare professionals or otherwise in furtherance of the Commercialization of the Collaboration Products to be conducted by Cytokinetics (whether alone

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or together with Astellas with respect to a particular Collaboration Product in a particular Indication) in the Co-Promotion Territory or Shared Territory in the event Cytokinetics exercises its rights under Section 9.6. For clarity, if [*] with respect to a particular [*] in accordance with Section [*] shall also be referred to as Co-Promote or Co-Promotion for the purpose of this Agreement.

1.27 “Co-Promotion Territory” means: (a) the U.S.; and (b) Canada.

1.28 “Cytokinetics Commercialization Period” means, on a [*], in the event [*] for a Collaboration Product with respect to [*] for which such Collaboration Product [*], and at the time of such [*] such Collaboration Product has [*] for any [*] Indication, [*] Indication or [*] Indication for which [*] such Collaboration Product is [*] if and when such Collaboration Product is [*] for any [*] Indication, [*] Indication or [*] Indication for which [*].

1.29 “Cytokinetics Know-How” means all Know-How that is (a) Controlled by Cytokinetics or its Affiliates during the Term and (b) reasonably necessary or useful for the Research, Development, Manufacture, Commercialization or Medical Affairs Activities of any Compound and/or Collaboration Product, provided, however, that Cytokinetics Know-How specifically excludes Collaboration Know-How.

1.30 “Cytokinetics Patents” means any Patent Right that is (a) Controlled by Cytokinetics or its Affiliates during the Term and (b) reasonably necessary or useful for the Research, Development, Manufacture, Commercialization or Medical Affairs Activities of any Compound and/or Collaboration Product, provided, however, that Cytokinetics Patents specifically exclude Collaboration Patents. The Cytokinetics Patents existing as of the Effective Date are listed in **Exhibit C**. For clarity, Cytokinetics Patents shall include any Patent Rights arising after the Effective Date that [*]

1.31 “Cytokinetics Technology” means Cytokinetics Patents and Cytokinetics Know-How.

1.32 “Develop” or “Development” means all development activities for any Compound or Collaboration Product that are directed to obtaining Marketing Approval(s) of the Collaboration Products, including: all non-clinical, preclinical and clinical activities, testing and studies of such Compound or Collaboration Product (including IND-Enabling Studies and translational research); manufacturing development, process and formulation development; toxicology, pharmacokinetic, pharmacodynamic, drug-drug interaction, safety, tolerability and pharmacological studies;

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distribution of such Compound or Collaboration Product for use in clinical trials (including placebos and comparators); statistical analyses; assay development; instrument design and development; protocol design and development; quality assurance and control; report writing; and the preparation, filing and prosecution of any MAA for such Collaboration Product; development activities directed to label expansion (including prescribing information) and/or obtaining Marketing Approval for one or more additional Indications or patient populations following initial Marketing Approval; development activities conducted after receipt of Marketing Approval which were a condition for the receipt of such Marketing Approval; and all regulatory activities related to any of the foregoing.

1.33 “Development Costs” means the [*] costs incurred by or on account of a Party in performing Development in accordance with the Development Plan.

1.34 “Diligent Efforts” means: (a) where applied to carrying out specific tasks and obligations of a Party under this Agreement, expending [*] to accomplish such task or obligation as such Party (on its own and/or acting through any of its Affiliates, sublicensees or subcontractors) would [*]; and (b) where applied to the Research, Development, Manufacture, and/or Commercialization of, or Medical Affairs Activities for, a Compound or Collaboration Product, the use of [*], in an [*], as [*], taking into account relevant factors including, without limitation, [*] and other relevant factors, including [*]. “Diligent Efforts” shall require that such Party (on its own and/or acting through any of its Affiliates, sublicensees or subcontractors), at a minimum: (i) promptly assign responsibility for such obligations to qualified personnel, set annual goals and objectives for carrying out such obligations, and monitor and hold personnel accountable for progress with respect to such goals and objectives; (ii) set and seek to achieve specific and meaningful objectives for carrying out such obligations, with timelines consistent with a comparable [*] program; and (iii) make and implement decisions and [*] designed to [*] with respect to such objectives.

1.35 “Dollars” means the U.S. dollar, and “\$” shall be interpreted accordingly.

1.36 “EMA” means the European Medicines Agency or any successor entity thereto.

1.37 “EU” or the “**European Union**” means the European Union and its member states as of the Amendment Effective Date, which are: Austria, Belgium, Bulgaria, Croatia, Cyprus,

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Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom, as well as Norway and Iceland, and each of their successors to the extent such successors occupy the same territory.

1.38 “[*] Indication” means, for [*] Activators: (a) SMA; and (b) any additional [*] Indication [*] pursuant to Section [*].

1.39 “[*] Activator” means (a) any small molecule compound that (i) is [*], (ii) has a specified level of stimulatory activity against any [*], as set forth in the applicable Compound Criteria, and (iii) the [*]; and (b) any [*] in subclause (a) above.

1.40 “[*] Activator” means, subject to the final sentence of this paragraph, (a) any small molecule compound that (i) is [*], (ii) has a specified level of stimulatory activity against any [*], as set forth in the applicable Compound Criteria, and (iii) the [*]; and (b) any [*] in subclause (a) above. [*] Activators include [*], but exclude all [*].

1.41 “FDA” means the United States Food and Drug Administration or any successor entity thereto.

1.42 “Field” means the treatment, prevention and/or amelioration of any diseases and medical conditions in humans.

1.43 “Filing” of an MAA means the acceptance by a Regulatory Authority of an MAA for filing and review, if applicable, or otherwise the submission of such MAA.

1.44 “First Commercial Sale” means, with respect to any Collaboration Product in any country or jurisdiction, the first sale of such Collaboration Product to a Third Party for distribution, use or consumption in such country or jurisdiction after the Marketing Approvals have been obtained for such Collaboration Product in such country or jurisdiction.

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1.45 “FTE” means the equivalent of a full-time individual’s work for a twelve (12) month period (consisting of a total of [*] hours per year of dedicated effort). Any person who devotes more or less than [*] hours per year on the applicable activities shall be treated as an FTE on a pro-rata basis, based upon the actual number of hours worked by such person on such activities, divided by [*]. For avoidance of doubt, the hours allocated to the work of general corporate or administrative personnel shall not be incorporated into FTE.

1.46 “FTE Rate” means an initial rate of [*] Dollars [*] per FTE per year for each Astellas and Cytokinetics, which shall apply through [*]. Thereafter, the FTE Rate shall be changed annually on a calendar year basis to reflect any year-to-year percentage increase or decrease (as the case may be) in the Consumer Price Index for All Urban Consumers for the U.S., as published by the U.S. Department of Labor, Bureau of Labor Statistics (“CPI”) (based on the change in the CPI from the most recent index available as of the Effective Date to the most recent index available as of the date of the calculation of such revised FTE Rate). The FTE Rate applicable to [*] shall be subject to the adjustment set forth in Section [*].

1.47 “GAAP” means the U.S. generally accepted accounting principles.

1.48 “Generic Product” means, with respect to a Collaboration Product in a particular country, any pharmaceutical product that (a) contains the same Active Ingredients and formulation as such Collaboration Product; (b) [*] in such country and [*] in such country; and (c) is sold in such country by a Third Party that is not a sublicensee of Astellas or its Affiliates and did not purchase such product in a chain of distribution that included any of Astellas or its Affiliates or sublicensees.

1.49 “Governmental Authority” means any federal, state, national, state, provincial or local government, or political subdivision thereof, or any multinational organization or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, any court or tribunal (or any department, bureau or division thereof, or any governmental arbitrator or arbitral body).

1.50 “IFRS” means International Financial Reporting Standards.

1.51 “IND” means any investigational new drug application, clinical trial application, clinical trial exemption or similar or equivalent application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

[*] = **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 406 of the Securities Act of 1933, as amended.**

1.52 “IND-Enabling Studies” means studies that are specifically required for an IND, including ADME (absorption, distribution, metabolism, and excretion), GLP toxicology studies, or studies required for the preparation of the CMC section of an IND, including studies related to analytical methods and purity analysis, and formulation and manufacturing development studies, all as necessary to obtain the permission of Regulatory Authorities to begin human clinical investigations.

1.53 “Indication” means any human diseases, syndromes and medical conditions that can be diagnosed, treated, prevented or ameliorated.

1.54 “Initiate” or “Initiation” means, with respect to a clinical trial of a Collaboration Product, the first dosing of the first human subject for such clinical trial.

1.55 “Know-How” means any information and materials, including discoveries, improvements, modifications, processes, methods, assays, designs, protocols, formulas, data, inventions, algorithms, forecasts, profiles, strategies, plans, results, coordinates for compound/apo protein structures, expression constructs, know-how and trade secrets (in each case, patentable, copyrightable or otherwise), but excluding any Patent Rights.

1.56 “Law” means any federal, state, local, foreign or multinational law, statute, standard, ordinance, code, rule, regulation, resolution or promulgation, or any order by any Governmental Authority, or any license, franchise, permit or similar right granted under any of the foregoing, or any similar provision having the force or effect of law.

1.57 “Lead Compound” means (a) Cytokinetics’ proprietary compound known as CK-2127107, which is the subject of the Lead Compound IND, and (b) any [*] in subclause (a) above.

1.58 “Lead Compound IND” means U.S. IND No. [*].

1.59 “Lead Product” means a Collaboration Product that contains the Lead Compound.

1.60 “Licensed Indications” means the following Indications: (a) [*] non-neuromuscular diseases and conditions (e.g., [*]; and (b) [*].

[*] = **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 406 of the Securities Act of 1933, as amended.**

1.61 “MAA” or “Marketing Authorization Application” means an application to the appropriate Regulatory Authority for approval to commercially sell a Collaboration Product (but excluding pricing approval) in the Field in a particular jurisdiction (including, without limitation, a New Drug Application in the U.S.) and all amendments and supplements thereto.

1.62 “Major EU Market Countries” means [*].

1.63 “Major Market Countries” means the [*].

1.64 “Manufacture” and “Manufacturing” mean activities directed to manufacturing, processing, filling, finishing, packaging, labeling, quality control, quality assurance testing and release, post-marketing validation testing, inventory control and management, storing and transporting any Compound and/or Collaboration Product.

1.65 “Manufacturing Costs” means, with respect to a particular Compound or Collaboration Product Manufactured and supplied by a Party pursuant to the Development Plan:

(a) if such Compound or Collaboration Product is Manufactured by such Party’s Third Party manufacturer, [*] costs incurred by such Party in association therewith, including for [*] with respect thereto;

(b) if such Compound or Collaboration Product is Manufactured by such Party itself, [*] including without limitation [*] manufacturing costs. Such [*] of Compound or Collaboration Product [*] and (ii) in accordance with IFRS (in the case of Astellas) or GAAP (in the case of Cytokinetics) consistently applied.

1.66 “Marketing Approval” means all approvals necessary for the commercial sale of a Collaboration Product in the Field in a given country or regulatory jurisdiction.

1.67 “Medical Affairs Activities” means activities, in compliance with all the applicable Law, designed to ensure or improve appropriate medical use of, conduct medical education regarding, or further research regarding, the Compounds and the Collaboration Products or to increase disease state awareness, including by way of example: (a) activities of medical scientific liaisons, which shall mean the following functions: (x) conduct of service based medical activities including providing input and assistance with consultancy meetings, recommending

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investigators for clinical trials and providing input in the design of such trials and other research related activities, and (y) delivery of non-promotional communications and conduct of non-promotional activities including presenting new clinical trial data and other scientific or disease state awareness information; (b) grants to support continuing medical education, symposia, or Third Party research related to Collaboration Products; (c) development, publication and dissemination of publications relating to the Compounds and the Collaboration Products and relevant disease states; (d) medical information services provided in response to inquiries communicated via sales representatives or received by letter, phone call or email; (e) conducting advisory board meetings or other consultant programs; (f) support of investigator-initiated trials; (g) managing relationships with cooperative groups, physician/hospital networks and disease state or patient and caregiver advocacy groups; (h) establishing and implementing risk, evaluation and mitigation strategies, (i) voluntary phase 4 trials or post-approval patient registries, (j) health economic and outcomes research (HEOR) activities, (k) independent medical education activities, and (l) non-promotional exhibiting at medical and scientific fora. For the purposes of clarity, post-approval clinical studies within the approved Indications, which were a condition for the receipt of Marketing Approval, shall be included within Development and shall not be included within Medical Affairs Activities.

1.68 “Net Sales” means the gross amount billed or invoiced by or for the benefit of Astellas, its Affiliates, and its sublicensees to independent, unrelated persons in bona fide arm’s length transactions with respect to a Collaboration Product, less the following deductions, as allocable to such Collaboration Product (if not previously deducted from the amount invoiced):

- (a) [*]
- (b) [*]
- (c) [*]
- (d) [*] and
- (e) [*]

If a single item falls into more than one of the categories set forth in clauses (a)-(e) above, such item may not be deducted more than once.

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Sales between Astellas and its Affiliates and sublicensees shall be disregarded for purposes of calculating Net Sales except if such purchaser is a distributor, pharmacy or end user.

If a Collaboration Product either (i) is sold in the form of a combination product containing both a Compound and one or more Active Ingredient(s) as separate molecular entity(ies) that are not Compounds; or (ii) is sold in a form that contains (or is sold bundled with) a delivery device therefor (in either case (i) or (ii)), a “**Combination Product**”), the Net Sales of such Collaboration Product for the purpose of calculating royalties and sales-based milestones owed under this Agreement for sales of such Collaboration Product, shall be determined as follows: first, Astellas shall determine the actual Net Sales of such Combination Product (using the above provisions) and then such amount shall be multiplied by the fraction $A/(A+B)$, where A is the invoice price of such Collaboration Product, if sold separately, and B is the total invoice price of other Active Ingredient or delivery device in such Combination Product if sold separately. If any other Active Ingredient or delivery device in such Combination Product is not sold separately, Net Sales shall be calculated by multiplying actual Net Sales of such Combination Product by a fraction A/C where A is the invoice price of such Collaboration Product if sold separately, and C is the invoice price of such Combination Product. If neither such Collaboration Product nor any other Active Ingredient (or delivery device) in such Combination Product is sold separately, the adjustment to Net Sales shall be determined by the Parties in good faith to reasonably reflect the fair market value of the contribution of such Collaboration Product in such Combination Product to the total fair market value of such Combination Product.

With respect to any sale of any Collaboration Product in a given country for any substantive consideration other than monetary consideration on arm’s length terms (which has the effect of reducing the invoiced amount below what it would have been in the absence of such non-monetary consideration), for purposes of calculating the Net Sales, such Collaboration Product shall be deemed to be sold exclusively for cash at the average Net Sales price charged to Third Parties for cash sales of such Collaboration Product in such country during the applicable reporting period (or if there were only *de minimis* cash sales in such country, at the fair market value as determined in good faith based on pricing in comparable markets). Notwithstanding the foregoing, Net Sales shall not include amounts (whether actually existing or deemed to exist for purposes of calculation) for Collaboration Products distributed for use in clinical trials.

Net Sales shall be calculated on an accrual basis, in a manner consistent with Astellas’ accounting policies for external reporting purposes, as consistently applied, in accordance with IFRS. To the extent any accrued amounts used in the calculation of Net Sales are estimates, such estimates shall be trued-up in accordance with Astellas’ accounting policies for external reporting purposes, as consistently applied, and Net Sales and related payments under this Agreement shall be reconciled as appropriate.

1.69 [*] Indication” means (a) [*], and (b) any other Indication [*] that is designated by the JDC as a [*] Indication pursuant to Section [*].

1.70 [*] Activators” means [*] Activators and [*] Activators, and specifically excludes (a) [*] Activators, (b) [*], and (c) any compound targeting any [*].

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1.71 “Patent Rights” means all patents and patent applications (which shall be deemed to include certificates of invention and applications for certificates of invention), including all divisionals, continuations, substitutions, continuations-in-part, re-examinations, reissues, additions, renewals, revalidations, extensions, registrations, pediatric exclusivity periods and supplemental protection certificates and the like of any such patents and patent applications, and any and all foreign equivalents of the foregoing.

1.72 “Person” means any individual, partnership, limited liability company, firm, corporation, association, trust, unincorporated organization or other entity.

1.73 “Phase 1 Clinical Trial” means a controlled human clinical trial of a Collaboration Product that would satisfy the requirements of 21 CFR 312.21(a) or corresponding foreign regulations, regardless of whether such trial is referred to as a “phase 1 clinical trial” in the Development Plan.

1.74 “Phase 2 Clinical Trial” means a controlled human clinical trial of a Collaboration Product that would satisfy the requirements of 21 CFR 312.21(b) or corresponding foreign regulations, regardless of whether such trial is referred to as a “phase 2 clinical trial” in the Development Plan.

1.75 “Phase 3 Clinical Trial” means a controlled or uncontrolled human clinical trial of a Collaboration Product that would satisfy the requirements of 21 CFR 312.21(c) or corresponding foreign regulations, regardless of whether such trial is referred to as a “phase 3 clinical trial” in the Development Plan.

1.76 [*] means any [*] that is intended [*] may be necessary to [*] in the Development Plan.

1.77 “Regulatory Authority” means any applicable Governmental Authority responsible for granting Marketing Approvals or pricing approvals for Collaboration Products, including the FDA, the EMA and any corresponding national or regional regulatory authorities.

1.78 “Regulatory Exclusivity” means any exclusive marketing rights or data exclusivity rights conferred by any Regulatory Authority with respect to a pharmaceutical product other than patents, including, without limitation, orphan drug exclusivity, new chemical entity exclusivity, data exclusivity, pediatric exclusivity, rights conferred in the United States under the Hatch-Waxman Act or the FDA Modernization Act of 1997, or rights similar thereto outside the United States.

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1.79 “Regulatory Materials” means any regulatory application, submission, notification, communication, correspondence, registration and other filings made to, received from or otherwise conducted with a Regulatory Authority in order to Research a Compound and/or Develop, Manufacture, or Commercialize a Compound or Collaboration Product in the Field in a particular country or jurisdiction. “Regulatory Materials” includes any IND, MAA and Marketing Approval.

1.80 “Registration Dossier” means the registration dossier designed to support Marketing Approval by the FDA and Marketing Approval in the EU (excluding any country-specific approvals for pricing or reimbursement).

1.81 “Research” means all research activities conducted by or on behalf of either Party or the Parties jointly pursuant [*].

1.82 “Retained Indications” means Indications that are not Licensed Indications. Retained Indications include the Indications listed in **Exhibit D**.

1.83 [*] Compounds” means (a) Tirasemtiv, (b) any compositions of matter (i) falling within the scope of any of the generic formulas disclosed in the Patent Rights listed in **Exhibit E** (the “[*] Patent Rights”) and/or (ii) specifically disclosed in the [*] Patent Rights; and (c) any [*] in subclause (a) or (b) above.

1.84 “Shared Territory” means (a) the Co-Promotion Territory and (b) the European Union and Switzerland.

1.85 [*] Activator” means (a) any small molecule compound that (i) is [*], (ii) has a specified level of stimulatory activity against any [*], as set forth in the applicable Compound Criteria, and (iii) the [*] and (b) any [*] in subclause (a) above.

1.86 “SMA” means spinal muscular atrophy.

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1.87 “Third Party” means any Person other than a Party or an Affiliate of a Party.

1.88 “Tirasemtiv” means Cytokinetics’ proprietary compound formerly known as CK-2017357.

1.89 “United States” or **“U.S.”** means the United States of America, including its fifty (50) states and the District of Columbia.

1.90 “Valid Claim” means a claim of an issued and unexpired patent (as may be extended through supplementary protection certificate or patent term extension) or a pending patent application included within [*], which claim has not been revoked, held invalid or unenforceable by a patent office, court or other governmental agency of competent jurisdiction in a final and non-appealable judgment (or judgment from which no appeal was taken within the allowable time period) and has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise.

1.91 Additional Definitions. The following table identifies the location of definitions set forth in various Sections of the Agreement:

<u>Definition</u>	<u>Section</u>
Alliance Manager	2.1
[*] Indication	[*]
[*] Advance Invoice	11.3(c)(i)
[*]	[*]
[*]	[*]
[*] True-Up Report	11.3(c)(ii)
[*] Development Work	[*]
[*] Date	[*]
[*] Products	14.3(a)
Astellas [*]	[*]
Astellas Co-Promotion Notice	9.6(b)(i)
Astellas Indemnitee	[*]
Astellas [*]	[*]
Astellas [*]	[*]
Astellas [*]	[*]
Bankruptcy Code	3.8
Combination Product	1.68
Commercial Operating Team	9.7
Commercialization Plan	9.3(a)
[*]	[*]
Confidentiality Agreement	17.8

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Co-Promotion Agreement	9.6(g)
[*]	[*]
Co-Promotion Matters	9.6(b)(i)
CY 5012	11.5(c)(i)
Cytokinetics Co-Funding Option	4.1(b)
Cytokinetics Co-Promotion Effort	9.6(c)
Cytokinetics Co-Promotion Recommendation	9.6(b)(ii)
Cytokinetics [*]	[*]
Cytokinetics Indemnitee	16.2
Cytokinetics [*]	[*]
Cytokinetics [*]	[*]
Cytokinetics Product Marks	12.5(b)
Cytokinetics Research FTEs	5.3
Cytokinetics [*]	[*]
Cytokinetics [*]	[*]
Development Advance Invoice	11.3(a)(i)
Development Plan	6.2(a)
Development Program	6.2(a)
Development Project Team	6.10
Development True-Up Report	11.3(a)(ii)
Disclosing Party	13.1(a)
[*]	[*]
Earlier Milestone Event	11.5(b)(i)
Early Stage Work	6.3(b)(ii)
Established Commercial Infrastructure	9.9
[*]	[*]
[*] Indication	[*]
[*]	[*]
FCPA	17.7(a)
FCPA Covered Person	17.7(a)
Federal Arbitration Act	17.6(a)
[*]	[*]
Indemnified Party	16.3
Indemnifying Party	16.3
[*] Rules	17.6(a)
JCC Determination	9.6(b)(ii)
Joint Commercialization Committee or JCC	2.6
Joint Development Committee or JDC	2.4
Joint Manufacturing Committee or JMC	2.5
Joint Medical Affairs Committee or JMAC	2.7
Joint Patent Committee or JPC	2.8
Joint Research Committee or JRC	2.3
Joint Steering Committee or JSC	2.2

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[*] Regulatory Materials	7.2(a)
Later Milestone Event	11.5(b)(i)
Lead Compound [*]	[*]
Lead Compound [*]	[*]
[*] Products	[*]
Medical Affairs Plan	10.3
MSL	10.1
[*]	[*]
Neuromuscular Indications	9.6(a)
[*]	[*]
[*]	[*]
Pharmacovigilance Agreement	7.5
Phase 1 Work	6.3(b)(i)
[*]	[*]
[*]	[*]
Product Infringement	12.4(a)
Product Marks	12.5(a)
Receiving Party	13.1(a)
Remainder	12.4(f)
Remedial Action	7.7
Research Advance Invoice	11.2(a)
Research Budget	5.3
Research Plan	5.3
Research Plan Costs	5.6
Research Program	5.1
Research Project Team	5.9
Research Term	5.2
Research True-Up Report	11.2(b)
Responsible Committee	13.4
[*] Product	[*]
[*]	[*]
Royalty Term	11.7(b)
[*]	[*]
SEC	13.5(b)
Term	14.1

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1.92 Interpretation. In this Agreement, unless otherwise expressly specified:

(a) The words “include”, “includes” and “including” shall be deemed to be followed by the phrase “without limitation”.

(b) words denoting the singular shall include the plural and vice versa and words denoting any gender shall include all genders;

(c) words such as “herein”, “hereof”, and “hereunder” refer to this Agreement as a whole and not merely to the particular provision in which such words appear;

(d) “days” means calendar days; and

(e) the Exhibits and other attachments form part of the operative provision of this Agreement and references to “this Agreement” shall include references to the Exhibits and attachments.

ARTICLE 2 GOVERNANCE

2.1 Alliance Managers. Each Party hereby appoints the person listed on **Exhibit F** to act as its alliance manager under this Agreement as of the Amendment Effective Date (the “**Alliance Manager**”). The Alliance Managers shall: (a) serve as the primary contact points between the Parties for the purpose of providing the other Party with information on the progress of such Party’s activities under this Agreement; (b) be primarily responsible for facilitating the flow of information and otherwise promoting communication, coordination and collaboration between the Parties; (c) act as advocates for the Collaboration as a whole; (d) have regular telephone calls; (e) use Diligent Efforts to facilitate the prompt resolution of any disputes; (f) attend as appropriate JRC, JDC, JMC, JCC and JMAC meetings; and (g) have the right to attend all other Committee and subcommittee meetings, all as non-voting members. An Alliance Manager may also bring any matter to the attention of any Committee if such Alliance Manager reasonably believes that such matter warrants such attention. Each Party may replace its Alliance Manager at any time upon written notice to the other Party.

2.2 Joint Steering Committee. The Parties shall establish a joint steering committee (the “**Joint Steering Committee**” or the “**JSC**”), composed of[*] of each Party, including the [*] under this Agreement and [*] under this Agreement. All JSC representatives will have sufficient authority within the applicable Party to make decisions [*] arising within the scope of the JSC’s responsibilities. Either Party may request that its own or the other Party’s personnel with expertise on a particular matter attend a JSC meeting where such matter will be discussed. The JSC shall in particular:

(a) oversee and provide strategic direction to the Collaboration;

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(b) oversee the integration and coordination of the Research, Development, Manufacture (as applicable), Commercialization and Medical Affairs Activities of the Compounds and Collaboration Products within the JSC member's company;

(c) provide a forum for discussion of the Research, Development, Manufacture, Commercialization and Medical Affairs Activities of the Compounds and Collaboration Products;

(d) review the Parties' progress against the Research Plan, Development Plan, Commercialization Plan and Medical Affairs Plan;

(e) oversee the operation of the JRC, JDC, JMC, JCC, JMAC and JPC, including resolving any disputed matter of the JRC, JDC, JMC, JCC, JMAC and JPC; and

(f) perform such other duties as are expressly assigned to the JSC in this Agreement, and such other functions as appropriate to further the purposes of this Agreement as may be allocated to it by the Parties' written agreement.

2.3 Joint Research Committee. The Parties shall establish a joint research committee (the "**Joint Research Committee**" or the "**JRC**"), composed of [*] of each Party that have [*] in the research of compounds similar to the Compounds, to monitor and coordinate the Research of Compounds under the Collaboration. The JRC shall exist during the Research Term. All JRC representatives will have sufficient authority within the applicable Party to make decisions [*] arising within the scope of the JRC's responsibilities. The JRC shall in particular:

(a) coordinate the activities of the Parties under the Research Plan and oversee the implementation of the Research Plan;

(b) prepare and approve annual or interim amendments to the Research Plan (including the Research Budget);

(c) provide a forum for and facilitate communications between the Parties with respect to the Research of Compounds;

(d) establish joint subcommittees, as appropriate, to carry out its functions; and

(e) perform such other functions as may be appropriate to further the purposes of this Agreement with respect to the Research of Compounds.

2.4 Joint Development Committee. The Parties shall establish a joint development committee (the "**Joint Development Committee**" or the "**JDC**"), composed of [*] of each Party that have [*] in the development of products similar to the Compounds and Collaboration Products, to monitor and coordinate the Development of the Compounds and Collaboration Products under the Collaboration. All JDC representatives will have sufficient authority within the applicable Party to make decisions [*]

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[*] arising with the scope of the JDC's responsibilities. The JDC shall in particular:

- (a) coordinate the activities of the Parties under the Development Plan and oversee the implementation of the Development Plan;
- (b) establish the protocol and statistical analysis plan for each human clinical trial conducted under the Development Plan;
- (c) prepare and approve annual or interim amendments to the Development Plan (including the Cytokinetics Development Budget);
- (d) provide a forum for and facilitate communications between the Parties with respect to the Development of the Compounds and Collaboration Products;
- (e) review the data and results of [*] a Collaboration Product [*] such Collaboration Product [*] in which case [*];
- (f) monitor and coordinate all regulatory actions, communications and submissions for the Compounds and Collaboration Products under the Development Plan, including allocating related medical affairs responsibilities between the Parties;
- (g) until formation of the JMAC, oversee medical education activities and establish a joint review process for medical affairs materials, including disease state awareness, medical education and other non-promotional materials;
- (h) establish joint subcommittees, as appropriate, to carry out its functions; and
- (i) perform such other functions as may be appropriate to further the purposes of this Agreement with respect to the Development of the Compounds and Collaboration Products.

2.5 Joint Manufacturing Committee. The Parties shall establish a joint manufacturing committee (the “**Joint Manufacturing Committee**” or “**JMC**”), composed of up to [*] of each Party that have [*] in the manufacture of compounds and products similar to the Compounds and Collaboration Products, to monitor and oversee the CMC Activities and other activities related to the Manufacture of the Compounds and Collaboration Products for use under the Collaboration. All JMC representatives will have sufficient authority within the applicable Party to make decisions [*] arising within the scope of the JMC's responsibilities. The JMC shall in particular:

- (a) discuss, approve and oversee implementation of and progress against the Development Plan and Commercialization Plan as they relate to CMC Activities;

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(b) coordinate and facilitate cooperation and flow of information between the Parties with respect to the Manufacture and supply of the Compounds and Collaboration Products for Development and Commercialization use in accordance with Article 8;

(c) coordinate and facilitate the transfer of Manufacturing Know-How as and to the extent provided in Article 8;

(d) establish joint subcommittees, as appropriate, to carry out its functions; and

(e) perform such other functions as may be appropriate to further the purposes of this Agreement with respect to the Manufacture of Compounds and Collaboration Products, as directed by the JDC or JCC (as applicable).

2.6 Joint Commercialization Committee. Unless otherwise agreed upon between the Parties, within [*], the Parties shall form and establish a joint commercialization committee (the “**Joint Commercialization Committee**” or “**JCC**”), composed of [*] of each Party that have [*] in the commercialization of products similar to the Collaboration Products, to monitor and oversee the Commercialization activities of the Collaboration Products under the Collaboration. All JCC representatives will have sufficient authority within the applicable Party to make decisions [*] arising within the scope of the JCC’s responsibilities. The JCC shall in particular:

(a) coordinate the activities of the Parties under the Commercialization Plan and oversee the implementation of the Commercialization Plan;

(b) prepare and approve annual or interim amendments to the Commercialization Plan;

(c) provide a forum for and facilitate communications between the Parties with respect to the Commercialization of the Collaboration Products;

(d) establish joint subcommittees, as appropriate, to carry out its functions; and

(e) perform such other functions as may be appropriate to further the purposes of this Agreement with respect to the Commercialization of the Collaboration Products.

2.7 Joint Medical Affairs Committee. Unless otherwise agreed upon between the Parties, [*] the Parties may agree upon, the Parties shall form and establish a joint medical affairs committee (the “**Joint Medical Affairs**

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Committee” or “JMAC”), composed of [*] of each Party that have [*] in Medical Affairs Activities of products similar to the Collaboration Products, to monitor and oversee the Medical Affairs Activities for the Compounds and Collaboration Products under the Collaboration. All JMAC representatives will have sufficient authority within the applicable Party to make decisions [*] arising within the scope of the JMAC’s responsibilities. The JMAC shall in particular:

- (a) coordinate the activities of the Parties under the Medical Affairs Plan and oversee the implementation of the Medical Affairs Plan;
- (b) prepare and approve annual or interim amendments to the Medical Affairs Plan;
- (c) prepare and approve the protocol and statistical analysis plan for each human clinical trial to be conducted under the Medical Affairs Plan;
- (d) provide a forum for and facilitate communications between the Parties with respect to the Medical Affairs Activities for the Compounds and Collaboration Products;
- (e) establish a joint review process for medical affairs materials, including disease state awareness, medical education and other non-promotional materials;
- (f) establish joint subcommittees, as appropriate, to carry out its functions; and
- (g) perform such other functions as may be appropriate to further the purposes of this Agreement with respect to the Medical Affairs Activities for the Compounds and Collaboration Products.

2.8 Joint Patent Committee. The Parties shall establish a joint patent committee (the “**Joint Patent Committee**” or “**JPC**”), composed of [*] representing each Party, to coordinate the prosecution and enforcement of Collaboration Patents under Article 12. Such patent counsel shall have sufficient authority within or on behalf of the applicable Party to make decisions [*] arising within the scope of the JPC’s responsibilities. The JPC shall in particular:

- (a) coordinate and facilitate the prosecution and enforcement of the Collaboration Patents, and make periodic reports of the same to the JSC and other Committees upon request;
- (b) discuss and develop patent strategy for Collaboration Patents, including making key decisions on drafting, filing, prosecution, maintenance, enforcement and defense of Collaboration Patents, as well as providing a forum for the Parties to discuss material issues and provide input to each other regarding Collaboration Patents;

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(c) determine which Patents are to be considered Collaboration Patents, and oversee the determination of inventorship of Collaboration Intellectual Property;

(d) confer regarding patent term extensions and listings in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations (known as the "Orange Book") and its foreign counterparts; and

(e) perform such other functions as may be appropriate to further the purposes of this Agreement with respect to the patent prosecution and enforcement activities under this Agreement.

2.9 [*] In the event that [*] a Compound and corresponding Collaboration Product [*] under Section [*] such Compound and Collaboration Product [*], the Parties shall [*] and discuss and decide [*] such Compound and Collaboration Product [*]; provided that, with respect to [*] contemporaneously with or following the [*] as agreed by the Parties. [*] such Compound and Collaboration Products [*] taking into consideration [*] as well as the [*] the roles and responsibilities of each Party [*] such Compound and Collaboration Product. For clarity, [*] pursuant to Section [*]

2.10 Limitation of Committee Authority. Each Committee shall only have the powers expressly assigned to it in this Article 2 and elsewhere in this Agreement and shall not have the authority to: (a) modify or amend the terms and conditions of this Agreement; (b) waive either Party's compliance with the terms and conditions of under this Agreement; or (c) determine any such issue in a manner that would conflict with the express terms and conditions of this Agreement.

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2.11 Committee Membership and Meetings.

(a) Committee Members. The members of each Party on the JSC, JRC, JDC and JPC as of the Amendment Effective Date are set forth in Exhibit E. Each Party may replace its representatives on any Committee by written notice to the other Party. Each Party shall appoint one (1) of its representatives on each Committee to act as a co-chairperson of such Committee. The co-chairpersons shall jointly prepare and circulate agendas and reasonably detailed minutes for each Committee meeting within thirty (30) days of such meeting.

(b) Meetings. Unless the Parties otherwise agree, each Committee shall hold meetings at such times as it elects to do so, but no less frequently than once every [*] for (i) the JRC; (ii) the JDC; (iii) the JMC; and (iv) the JCC. In all other circumstances, each Committee shall hold regular meetings no less frequently than once every [*] and more frequently as needed upon written request of either Party and consent of the other Party, which consent shall not be unreasonably withheld or delayed. Meetings of each Committee shall be held via teleconference, via videoconference or in person, provided that at least [*] per year for the [*] and [*] per year for the [*] shall be held in person (unless the Parties otherwise agree) at locations to be alternately selected by each Party. Each Party shall be responsible for all of its own expenses of participating in any Committee. No action taken at any meeting of a Committee shall be effective unless a representative of each Party is participating.

(c) Non-Member Attendance. Each Party may from time to time invite a reasonable number of participants, in addition to its representatives, to attend the Committee meetings in a non-voting capacity; provided that if either Party intends to have any Third Party (including any consultant) attend such a meeting, such Party shall provide prior written notice to the other Party and shall ensure that such Third Party is bound by confidentiality and non-use obligations consistent with the terms of this Agreement.

2.12 Continuity of Representation. Notwithstanding the Parties' respective right to replace its Alliance Manager and members of Committees by written notification to the other Party, each Party shall strive to maintain continuity in the representation of such Alliance Manager and Committee members. If a particular Committee ceases to exist but certain activities that have been overseen by such Committee are still ongoing, then the Parties shall by mutual written agreement allocate the responsibility for overseeing such activities to another then-operating Committee that is competent and suitable in authority and expertise.

2.13 Decision-Making. All decisions of each Committee shall be made by [*]. If after reasonable discussion and good faith consideration of each Party's view on a particular matter before a Committee, the representatives of the Parties cannot reach an agreement as to such matter within [*] after such matter was brought to such Committee for resolution or after such matter has been referred to such Committee, such disagreement shall be referred to the JSC (in the case of disagreement of the JRC, JDC, JMC, JCC, JMAC, JPC or other joint subcommittees)

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for resolution. If the JSC cannot resolve such matter within [*] after such matter has been referred to them, then:

- (a) [*] [*] for those set forth in Section [*]
- (b) [*] [*]:
 - (i) pertaining to [*] as to whether to [*]; and/or
 - (ii) pertaining to the following aspects of activities relating to [*]:

(1) the [*] Activators in any such Indication (including the related [*]) to generate the [*] as part of the Collaboration and the related [*] for so long as [*] such Development, including the generation of the [*] as set forth in Section [*] for which [*] is responsible under Section 6.3[*] related matters, but [*], as well as the [*]. For clarity, after [*] without the [*];

(2) the [*] Activators in any such [*], as set forth in more detail in Section [*]. For clarity, [*] shall not cover the [*], which shall be [*] subject to the [*] if the matter is [*] during the [*];

(3) the [*] Activators in any such [*] during the [*];

(4) if [*] for such [*] for such [*]; and

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(5) if [] for such [] for such [] consistent with Article [] set forth in this Section 2.13(b).

(c) [] The following issues in Sections 2.13(c)(i) through (v) below (the []) shall be subject to []

(i) the [] Indication ([] Indication) as [] Indication and the related [] the Development Plan pertaining to the Development of one or more [] Activator(s) in such Indication as set forth in Section []. For clarity, if the Parties [] Indication ([] Indication []) as [] Indication, or on the [] Development Plan pertaining to such Indication, then such [] Indication shall [] Indication;

(ii) the [] Activator in any [] Indications, including [] to support (A) [] such Compound and corresponding Collaboration Product []; and (B) [] such Compound and corresponding Collaboration Product [] with respect to such [] Activator and [] with respect thereto;

(iii) the [] (but the related [] subject to the [] (as applicable) subject to the [] if the matter is []) described in Sections [] as subject to [];

(iv) the [] set forth in the Development Plan [], except for any []; and

(v) any other decision [] under this Agreement.

[]

[] = **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 406 of the Securities Act of 1933, as amended.**

(d) [*]

(i) With respect to [*] the Development activities (which include [*] in connection with such Development activities to the extent provided in Article [*] pursuant to Section [*] with respect to [*] as well as the related [*] (which shall be subject to [*]), unless such activities [*] under the Collaboration, in which case the status quo will remain in effect until the issue is resolved. For clarity, [*], such matters shall be [*].

(ii) [*] with respect to [*] Indications [*] as set forth in Section [*].

(iii) [*] Indication, the Party [*] shall have the [*] with respect to [*] as set forth in Section [*].

(iv) The Party [*] Collaboration Product [*] will have the [*] with respect to [*].

2.14 Discontinuation of Participation on a Committee. The activities to be performed by each Committee shall solely relate to governance under this Agreement, and are not intended to be or involve the delivery of services. Each Committee shall continue to exist until the first to occur of: (a) the Parties mutually agreeing to disband the Committee; or (b) Cytokinetics providing written notice to Astellas of its intention to disband and no longer participate in such Committee. Once the Parties mutually agree or Cytokinetics has provided written notice to disband such Committee, such Committee shall have no further obligations under this Agreement and, thereafter, the Alliance Managers shall be the contact persons for the exchange of information under this Agreement and decisions of such Committee shall be decisions as between the Parties, subject to the other terms and conditions of this Agreement.

2.15 Budgets and Fiscal Years. The Parties acknowledge that Astellas' fiscal year runs from April 1 through March 31, while Cytokinetics' fiscal year runs from January 1 through December 31. Accordingly, [*] relating to the Research, Development, Medical Affairs and Commercialization of the Compounds and Collaboration Products [*]

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**ARTICLE 3
LICENSES**

3.1 License to Astellas. Subject to the terms and conditions of this Agreement, Cytokinetics hereby grants to Astellas the following royalty-bearing worldwide licenses [*] under the Cytokinetics Technology and Cytokinetics' interest in the Collaboration Intellectual Property:

(a) to Research (i) [*] Activators in the Collaboration Indications and (ii) [*] Activators in the Field, in each case pursuant to the Research Plan during the Research Term, which license shall be [*] as set forth in Section [*];

(b) to Develop (i) [*] Activators in the Collaboration Indications and (ii) [*] Activators in the Field, in each case pursuant to the Development Plan, which license shall be [*] as set forth in Section [*];

(c) to use [*] Activators and Collaboration Products containing [*] Activators in the Collaboration Indications and to make, have made, offer for sale, sell and otherwise Commercialize [*] Activators and Collaboration Products containing [*] Activators for use in the Collaboration Indications, [*] except as provided in Sections [*] below;

(d) to use [*] Activators and Collaboration Products containing [*] Activators in the Field and to make, have made, offer for sale, sell and otherwise Commercialize [*] Activators and Collaboration Products containing [*] Activators for use in the Field, [*], except as provided in Sections [*] below; and

(e) to perform Medical Affairs Activities for the Compounds and Collaboration Products pursuant to the Medical Affairs Plan, [*], except as provided in Sections [*] below.

Subject to Section [*] the licenses granted by Cytokinetics to Astellas under this Agreement [*] to develop, make, have made, use, sell, offer for sale or otherwise commercialize [*] that is [*] with a Compound.

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3.2 Sublicense Rights. Subject to the terms and conditions of this Agreement:

(a) Further subject to Section [*] below, each Party may exercise its rights and perform its obligations under this Agreement by itself or through the engagement of any of its Affiliates [*] in the performance of this Agreement.

(b) Each Party may sublicense the rights granted to it under Section [*] (as applicable) to one (1) or more Third Parties, provided, however, that such Party shall: (i) [*], and (ii) [*] the other Party [*].

(c) Notwithstanding the foregoing, [*] with respect to Collaboration Products [*] but in any event [*].

(d) Each Party shall remain directly responsible for all of its obligations under this Agreement that have been delegated, subcontracted or sublicensed to any of its Affiliates, sublicensees or subcontractors and shall ensure that such Affiliates, sublicensees and subcontractors comply with the terms and conditions of this Agreement.

3.3 Cytokinetics' Retained Rights. Cytokinetics and its Affiliates hereby retain:

(a) the rights to practice the Cytokinetics Technology and Cytokinetics' interest in the Collaboration Intellectual Property to exercise its and their rights and perform its and their obligations under this Agreement, whether directly or through one or more licensees; and

(b) subject to Section [*] the exclusive rights to otherwise practice and license the Cytokinetics Technology and Cytokinetics' interest in the Collaboration Intellectual Property outside the scope of the licenses granted to Astellas under Section 3.1, including researching, developing, manufacturing, having manufactured and commercializing [*] in the Retained Indications.

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3.4 License to Cytokinetics. Subject to the terms and conditions of this Agreement, Astellas hereby grants to Cytokinetics the following fully paid-up licenses [*]:

(a) under the Astellas Technology and Astellas' interest in the Collaboration Intellectual Property to Research (i) [*] Activators in the Collaboration Indications and (ii) [*] Activators in the Field, in each case pursuant to the Research Plan during the Research Term, [*];

(b) under the Astellas Technology and Astellas' interest in the Collaboration Intellectual Property to Develop the Compounds and Collaboration Products pursuant to the Development Plan, [*];

(c) under the Astellas Technology and Astellas' interest in the Collaboration Intellectual Property to manufacture and have manufactured the Compounds and Collaboration Products pursuant to the Development Plan or Commercialization Plan as appropriate, [*];

(d) under the Astellas Technology and Astellas' interest in the Collaboration Intellectual Property to Co-Promote the Collaboration Products in the Co-Promotion Territory (or Shared Territory, as applicable and as set forth in Section 9.6) pursuant to the Commercialization Plan upon Cytokinetics' exercise of the Co-Promotion option under Section 9.6, [*];

(e) under the Astellas Technology and Astellas' interest in the Collaboration Intellectual Property to Commercialize in the Shared Territory the Collaboration Products in any [*] Indication(s) [*];

(f) further subject to Section [*] under Astellas' interest in the Collaboration Intellectual Property to research, develop, manufacture, have manufactured and commercialize [*] for uses in the Retained Indications worldwide, [*]; and

(g) under the Astellas Technology and Astellas' interest in the Collaboration Intellectual Property to perform Medical Affairs Activities for the Compounds and Collaboration Products in the Co-Promotion Territory (or Shared Territory, as applicable and as set forth in Article 10) pursuant to the Medical Affairs Plan, [*].

3.5 No Implied Licenses; Negative Covenant. Except as set forth herein, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise,

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under or to any trademarks, Patent Rights, Know-How, or other intellectual properties owned or Controlled by the other Party. For clarity, the license granted to each Party under any particular Patent Rights or Know-How Controlled by the other Party shall confer exclusivity to the Party obtaining such license only to the extent the Party granting such license Controls the exclusive rights to such Patent Rights or Know-How. Neither Party shall, nor shall permit any of its Affiliates or sublicensees to, practice any Patent Rights or Know-How licensed to it by the other Party outside the scope of the license granted to it under this Agreement.

3.6 [*]

(a) Except as set forth in Section [*] and subject to Sections [*] below, [*]:

(i) [*], other than [*] Activators for use in the [*] pursuant to this Agreement;

(ii) [*] Activators for use in the [*] (A) pursuant to this Agreement [*]; (B) pursuant to Section [*] or (C) as otherwise agreed by the Parties; or

(iii) [*] for use in the [*] pursuant to this Agreement or the Collaboration.

(b) Notwithstanding the foregoing, [*] will not be deemed to be conducted under or pursuant to this Agreement or the Collaboration. [*] shall mean any [*] for which the [*], but excluding any [*] means: (i) [*] unless and until the [*]; and (ii) any other [*] but only if the [*]

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[*]

(c) [*] shall use Diligent Efforts to [*] Activator that is [*] the Collaboration Indications, including by [*] any Collaboration Product containing a [*] the Collaboration Indications, or [*] any Collaboration Product containing a [*]. So long as [*] set forth in this subsection (c), the [*] Collaboration Products [*] shall not, by itself, be deemed [*] under Section [*] of its obligations under this Section 3.6.

(d) [*] shall use Diligent Efforts to [*] the Licensed Indications [*], including by [*] the Licensed Indications [*] the Licensed Indications [*]. So long as [*] set forth in this subsection (d), the [*] shall not, by itself, be deemed [*] under Section [*] of its obligations under this Section 3.6.

(e) If either Party [*] and if such [*], as of the [*] such Party would [*] set forth in Section [*], then such Party shall [*] either (i) [*] of this Agreement, in which event [*] a Compound and/or Collaboration Product under this Agreement and subject to the terms and conditions hereunder and any [*] the Research, Development, Manufacture or Commercialization of [*], or (ii) [*]. Such Party's [*] shall not be deemed [*] set forth in this Section 3.6; provided that such Party [*] under this Agreement and [*] the other Party [*] [*] as used in this Section 3.6(e), means [*] by such Party [*].

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(f) If [*] with respect only to any of the [*] pursuant to Section [*] apply with respect to [*].

3.7 Subcontractors. Each Party shall have the right to engage subcontractors for purposes of conducting activities assigned to it under this Agreement and grant a limited sublicense to such Third Parties solely for the purpose of performing such activities, provided that any such subcontractor is bound by written obligations of confidentiality and non-use consistent with this Agreement [*] and has agreed to [*] that relate to any Compounds or Collaboration Products or their use, manufacture or sale, which [*] as appropriate. Each Party shall remain directly responsible for any obligations under this Agreement that have been delegated or subcontracted to any subcontractor, and shall be directly responsible for the performance of its subcontractors.

3.8 365(n) Rights. All rights and licenses granted under or pursuant to any section of this Agreement, including the licenses granted under this Article 3 and Section 14.3, are and will otherwise be deemed to be for purposes of Section 365(n) of the United States Bankruptcy Code (Title 11, U.S. Code), as amended (the “**Bankruptcy Code**”), licenses of rights to “intellectual property” as defined in Section 101(35A) of the Bankruptcy Code. Each Party will retain and may fully exercise all of its respective rights and elections under the Bankruptcy Code. Each Party agrees that the other Party, as licensee of such rights under this Agreement, will retain and may fully exercise all of its rights and elections under the Bankruptcy Code or any other provisions of applicable Law outside the United States that provide similar protection for “intellectual property.” Each Party further agrees that, in the event of the commencement of a bankruptcy proceeding by or against such Party under the Bankruptcy Code or analogous provisions of applicable Law outside the United States, to the extent permitted by Law, [*] the Research and/or Development of the Compounds and/or Collaboration Products under this Agreement pursuant to the Research Plan and/or Development Plan, as appropriate, which, [*]. Additionally, upon request by the other Party, the bankruptcy Party shall [*].

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ARTICLE 4
EXPANSION OF COLLABORATION

4.1 [*] Indications.

(a) Addition of [*] Indications. In addition to SMA, the Parties may add one or more Retained Indication(s) [*] as [*] Indication(s) by mutual agreement. If a Party is interested in adding any such Indication as [*] Indication, such Party shall notify the other Party and provide the other Party with [*] for such Indication, and the Parties shall confer and discuss such proposed addition. Such Indication shall be added as [*] Indication [*] the Development Plan pertaining to the Development of [*] Activators in such Indication. If such Indication is added to the [*] Indications, the Parties shall [*] agreed by the Parties).

(b) Cytokinetics Co-Funding Option. On a [*] Activator-by-[*] Activator basis, Cytokinetics shall have [*] option to co-fund [*] (the “**Cytokinetics Co-Funding Option**”). Cytokinetics may exercise the Cytokinetics Co-Funding Option for a particular [*] Activator by providing a written notice of option exercise to Astellas at any time [*] Indication for such [*] Activator. Astellas shall provide Cytokinetics with [*].

(c) [*]. If: (i) [*] for a particular [*] Activator, or (ii) [*] for such [*] Activator [*] with written notification [*] then in each case [*].

(d) [*] means, with respect to a particular [*] Activator, the [*], including, but not limited to, [*] regardless of the [*] pursuant to Section [*] in accordance with the Development Plan and [*] Indication(s) (including any [*],

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but excluding any [*]) to generate the [*] for a particular [*] Activator in [*] Indications. For clarity, [*] shall include the [*] for such [*] Activator with the [*], regardless of [*], but shall exclude the [*] in the Shared Territory, or [*] for such [*] Activator in a [*] in the Astellas Territory. [*] shall include the [*] of the Compound and Collaboration Product [*] but shall exclude the [*] necessary for the [*].

4.2 [*] Indications.

(a) [*] Indications. [*] one or more [*] a [*] Indication upon written notice to [*] Development activities for such Collaboration Product for such Indication. In connection with [*] shall provide [*] the Development Plan (including the [*]) pertaining to the Development of [*] Activators in such Indication(s) and [*] the JDC. If the JDC [*] and if the [*] will have the [*].

(b) [*] [*] shall have the right to [*] the [*] Indication [*] for such Indication [*]. If [*] shall also be [*] Development activities for such Indication pursuant to Section [*] shall continue to [*] ([*], to the extent practicable [*] Development program, and [*] under the Development Plan) [*] Development work [*] including, but not limited to, the [*] pertaining to such Indication subject to [*] set forth in Article [*]. [*] with respect to any [*] Indication [*] at any of the [*]: (i) [*] (for any [*] Indication) [*] such Indication to the Collaboration under Section [*]; (ii) if applicable, [*] with respect to the [*] the Development of the [*]

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[*] Activator in such Indication under Section [*] Development activities with respect to such Compound in such Indication; and/or (iii) if applicable, [*] with respect to the [*] Indication [*] the Development of a [*] in such Indication under Section [*] for such Indication. [*] related Development work [*] the Development Plan [*].

(c) [*] means with respect to a particular [*] Activator in [*] Indication, the [*], as well as any [*], but excluding any [*]. [*] Indication [*] shall include the [*] for [*] Activator with the [*], regardless of [*] but shall exclude the [*] in the Shared Territory, or [*] for [*] Activator in a [*] in the Astellas Territory, which [*] shall be [*] Indication [*] shall include the [*] but shall exclude the [*].

ARTICLE 5 RESEARCH

5.1 General. The Parties will conduct a research collaboration to discover, identify, characterize and optimize [*] Activators for further Development in the Licensed Indications and/or [*] Indications and [*] Activators in the Field pursuant to the Research Plan (the “**Research Program**”).

5.2 Research Term. The term of such Research Program (the “**Research Term**”) shall commence on the Effective Date and end on December 31, 2016. The Research Term may be extended by the Parties’ mutual written agreement.

5.3 Research Plan. All Research activities under this Agreement shall be conducted pursuant to a comprehensive written Research plan for Astellas’ fiscal year during the Research Term (the “**Research Plan**”). The Research Plan shall allocate Research responsibilities between the Parties and shall set forth the objectives, activities and criteria for evaluation for such Research, as well as the timeline related thereto. The Research Plan shall also set forth the detailed budget

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for such Research activities, including a minimum of [*] Cytokinetics FTEs that Astellas shall support annually [*] (the “**Cytokinetics Research FTEs**”), the number of Astellas FTEs committed by Astellas during the Research Term and outsourced costs (the “**Research Budget**”). From time to time during the Research Term, the JRC shall prepare updates and amendments, as appropriate, to the then-current Research Plan (including the Research Budget). In any event, the Research Plan for the forthcoming Astellas’ fiscal year shall be approved by [*] of the preceding year, provided that by [*] of each calendar year, the JRC shall agree upon a proposed budget for the following Astellas fiscal year with respect to costs other than for the Cytokinetics Research FTEs, and Astellas shall use good faith efforts to obtain internal approval for such proposed budget to become effective by [*]. The JRC shall have the right to approve updates and amendments to the Research Plan (including the Research Budget), provided that no amendment to the Research Plan (including the Research Budget) shall decrease the number of Cytokinetics Research FTEs supported by Astellas without Cytokinetics’ consent. Once approved by the JRC, such revised Research Plan shall replace the prior Research Plan. If the terms of the Research Plan contradict, or create inconsistencies or ambiguities with, the terms of this Agreement, then the terms of this Agreement shall govern.

5.4 Conduct of Research. Each Party shall use Diligent Efforts to carry out the Research activities assigned to it in the Research Plan and shall conduct such activities in good scientific manner, and in compliance with all applicable Laws. Each Party shall keep the other Party reasonably informed as to its progress in the conduct of the Research Plan through meetings of the JRC. At least [*] Business Days before each JRC meeting, each Party shall submit to the JRC a written summary of its Research activities since its prior report. All [*] under the Research Plan will be [*], provided that neither Party will be required to [*] where it reasonably believes that [*].

5.5 Research Records. Each Party shall maintain complete, current and accurate records of all Research activities conducted by it hereunder, and all data and other information resulting from such activities. Such records shall fully and properly reflect all work done and results achieved in the performance of the Research activities in good scientific manner [*] to the extent [*]. After the Effective Date, upon reasonable request of [*] to be mutually agreed by the Parties, [*] that pertain to the Compounds and/or Collaboration Products or otherwise relate to the Research performed pursuant to the Research Plan [*] as described in the [*] shall be deemed Confidential Information [*].

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5.6 Research Plan Costs. Subject to this Section 5.6, Astellas shall be responsible for all the costs and expenses incurred by both Parties in performing the Research in accordance with the Research Plan (the “**Research Plan Costs**”) and shall reimburse Cytokinetics for the Research Plan Costs incurred by or on account of Cytokinetics in accordance with the Research Budget pursuant to Section 11.2. Research Plan Costs that are incurred by Cytokinetics and subject to reimbursement by Astellas shall include the costs of [*] set forth in the Research Plan, and [*]. During any given Astellas fiscal year, Astellas shall not be responsible for reimbursement of (i) any [*]; or (ii) any [*] the applicable Research Budget.

5.7 Research in [*] Indications. Notwithstanding anything to the contrary in this Agreement, the Parties may conduct Research of [*] Activators in one or more [*] Indications to [*], but only to the extent agreed and set forth in the Research Plan as part of the Research Program governed by this Article 5. Neither Party shall be obligated to agree to the conduct of any such Research. For clarity, the Parties may [*] the Collaboration in accordance with Article [*].

5.8 Other [*]. Each Party shall have the right to [*] the Research Plan solely for the purpose of [*], provided that such activities shall [*] and neither Party shall have the right to [*] the other Party or [*] the other Party in connection therewith.

5.9 Research Project Team. The Parties will establish a research project team (the “**Research Project Team**”) that will be responsible for managing, reviewing and implementing the performance of the day to day activities of both Parties for all stages of the Research Program, including review and decision making regarding lead optimization, safety evaluation, structural biology, computational chemistry and pharmacology. Each Party will have representation on the Research Project Team throughout the Research Program. The Research Project Team shall be subordinate to and governed by the JRC.

ARTICLE 6 DEVELOPMENT

6.1 General. Subject to the terms and conditions of this Agreement, the Parties will collaborate with respect to the Development of the Compounds and Collaboration Products in the Collaboration Indications (for [*] Activators) or the Field (for [*] Activators) for Regulatory Approval under the direction of the JDC and

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pursuant to the Development Plan, as set forth in more details below. The Parties intend to pursue Development of the Lead Compound and other Compounds and Collaboration Products broadly across an array of Indications.

6.2 Development Plan.

(a) The Development of the Compounds and Collaboration Products under this Agreement (the “**Development Program**”) shall be conducted pursuant to a comprehensive written Development plan (the “**Development Plan**”). The Development Plan for each Compound and corresponding Collaboration Products shall set forth the timeline and details of: (i) all preclinical and clinical Development activities to be conducted by the Parties as necessary to generate data sufficient to meet the requirements for Marketing Approval of such Compound and corresponding Collaboration Products for each of the Indications as agreed by the Parties and set forth in the Development Plan; (ii) the protocol synopsis for each clinical trial included in such Development Plan; (iii) a Manufacturing plan; and (iv) any other Development activities that the Parties agree to pursue in collaboration for such Compound and corresponding Collaboration Products. The Parties agree that: (A) the Development Plan will contain detailed plans for at least [*] covered by the Development Plan, and summary plans for periods thereafter, and (B) the budget associated with such Development Plan shall be subject to the approval process set forth in Section 6.2(d). The Development Plan shall include a coordinated development and regulatory strategy, including the Parties’ respective roles in the development of each Collaboration Product and the countries in which Development of Collaboration Product will occur. The Development Plan shall also set forth: (1) a detailed budget of the Development activities to be [*]; (2) if Cytokinetics has exercised the Cytokinetics Co-Funding Option for a Collaboration Product and [*] for such Collaboration Product, a detailed budget for [*] of such Collaboration Product in the [*] Indications (the [*]); and (3) if [*] Indication [*] the Collaboration and [*] for such [*] Indication, a detailed budget for such [*] Indication Development Work (the “[*] **Indication Development Budget**”). Upon the other Party’s reasonable request, each Party shall [*] Development activities under the Development Plan. The [*] shall be included in the Development Plan and [*] shall be subject to JDC approval. For reference, the Development Plan in effect as of the Amendment Effective Date is [*] which was approved by the JDC and signed by the JDC co-chairs in [*].

(b) The initial focus of the Development Program was the conduct of Phase 1 Clinical Trials and Phase 2 readiness activities for the Lead Compound in 2013, with the [*] for the Lead Compound [*]

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(c) The Development Program in 2015 shall include the initial Phase 2 Clinical Trial of the Lead Compound in SMA. As of the Amendment Effective Date, the Parties have agreed on a [*] for such initial Phase 2 Clinical Trial within the document attached hereto as **Exhibit M**. Promptly after the Amendment Effective Date, the JDC shall update the Development Plan to include the conduct of such initial Phase 2 Clinical Trial in 2015, consistent with [*] set forth in such exhibit.

(d) The JDC shall update the Development Plan (including [*] as applicable) at least annually, with such annual update to be finally approved no later than [*] of the preceding Astellas' fiscal year, provided that [*] Indication [*] subject to the [*] the JDC (and [*] Indication [*]) after [*] for such Indication. By [*] of each calendar year starting on [*] Development activities are [*] the updated Development Plan, the JDC shall agree upon a proposed [*] for the following Astellas fiscal year beyond [*]. Astellas shall use good faith efforts to [*]. From time to time during the Term, the JDC shall prepare amendments, as appropriate, to the then-current Development Plan (including [*] as applicable), including adding additional Compounds and Collaboration Products as well as additional Indications [*] the Collaboration pursuant to Article [*] The JDC shall have the right to approve updates and amendments to the Development Plan (including [*] as applicable), provided that [*] subject to the [*] the JDC (and [*]) after [*] for such Indication. Once approved by the JDC, such revised Development Plan shall replace the prior Development Plan.

(e) If the terms of the Development Plan contradict, or create inconsistencies or ambiguities with, the terms of this Agreement, then the terms of this Agreement shall govern.

6.3 Allocation of Development Responsibilities. The Development Plan shall allocate Development responsibilities of the Compounds and Collaboration Products between the Parties as follows:

(a) **Astellas Responsibilities.** Subject to Sections 6.3(b), 6.3(c) and 6.3(d) below, Astellas shall be primarily responsible for the Development of (i) [*] Activators and corresponding Collaboration Products: (A) in the Licensed Indications and [*] Indications throughout the world; (B) in [*] Indications for [*] in the Shared Territory and [*]

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Development activities in Astellas Territory; and (C) and [*] Indications unless Astellas [*] the conduct of such [*] or as otherwise set forth in Article [*] and (ii) [*] Activators and corresponding Collaboration Products in the Field throughout the world, in each case pursuant to the Development Plan. While it is contemplated that Cytokinetics shall be responsible for the Phase 1 Work and Early Stage Work as described in subsection (b) below, the JDC may allocate to Astellas specific clinical and non-clinical activities to be conducted in parallel with the Phase 1 Work and/or Early Stage Work [*].

(b) Cytokinetics Responsibilities. Notwithstanding Section 6.3(a), Cytokinetics shall be responsible for the conduct of:

(i) the Phase 1 Clinical Trials of the Lead Compound (but excluding [*] Development activities in the Astellas Territory) and Phase 2 readiness activities in Licensed Indications (including [*] but excluding any activities allocated to Astellas pursuant to subsection (a) above) pursuant to the Development Plan through the initiation of the first Phase 2 Clinical Trial for the Lead Compound in Licensed Indications (the “**Phase 1 Work**”);

(ii) the Development activities for the Lead Compound in [*] Indications prior to [*] (but excluding any [*] Development activities in the Astellas Territory) (the “**Early Stage Work**”), including the [*] and the initiation of the initial Phase 2 Clinical Trial in SMA in 2015, and, subject to the Parties’ mutual agreement, in Licensed Indications;

(iii) other Development activities for the Lead Compound and other [*] Activators in [*] Indications allocated to Cytokinetics by the JDC, taking into consideration [*] of the Collaboration;

(iv) all Development activities for [*] Activators in [*] Indications to generate [*] for such Compounds in such Indications (the “[*] **Indication Development Work**”), including [*] (to the extent provided in Article [*]) in connection with such Development activities but excluding [*] for such [*] Indication and [*]; and

(v) other Development activities under the Development Plan [*] [*].

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(c) Development in [*] Indications.

(i) Notwithstanding Section [*] shall have the right, but not the obligation, to conduct Development activities for Compounds and Collaboration Products in [*] Indication(s) [*] as set forth in this Section 6.3(c) (“[*] **Indication Development**”).

(ii) [*] and shall not be subject to the [*] set forth in Section [*]. [*] shall have the right, but not the obligation, to [*] Compounds and Collaboration Products [*] Indication pursuant to subsections (iv) through (vi) below.

(iii) In addition to [*] as set forth in subsection (ii) above, [*] Development Plan [*] Development activities for one or more Collaboration Products for [*] Indication, [*] Development activities for such Indication [*] the Development Plan [*] Development in such Indication in accordance with the Development Plan, [*] such Indication as a [*] Indication. Upon [*] such Indication [*] Indication, provided that, in [*] Development in such Indication under the Development Plan will [*] the Development and/or Commercialization of Compound and Collaboration Product in Indications [*] Developed and/or Commercialized [*] pursuant to the Development Plan and/or Commercialization Plan.

(iv) [*] Indication Development, [*] a reasonably [*] by the JDC, such [*] the Development Plan and such [*] Indication Development shall be conducted pursuant to such plan.

(v) [*] Indication Development as part of the regular JDC reporting cycle. Following the [*] Indication Development for a Compound and corresponding Collaboration Product in a [*] Indication Development as well as the [*] Indication Development for such Collaboration Product [*] as well as the [*] the Development of such Compound or Collaboration Product in such Indication [*] [*]; provided that if such [*] Indication is [*] as set forth in Section [*].

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(vi) [*] such Development work, then (A) [*] Indication Development [*] as set forth in Section [*] (B) [*] such Compound and Collaboration Product in such Indication as set forth in Section [*]; and (C) all [*] Development in such [*] Indication shall be subject to the [*] under this Agreement applicable to the Development for [*] Indications other than [*] Indication, and the [*] the Development Plan and Cytokinetics Development Budget to include such continued Development work in such [*] Indication, including allocation of the Parties' respective responsibilities for [*] Development work (i.e., the Parties' respective activities in [*]).

(vii) [*] such Development work, then such Compound and Collaboration Product will [*] Indication; provided that if the Development of such Compound or Collaboration Product in such [*] Indication [*] or otherwise by the Parties, then Section [*] shall apply.

(d) Development in [*] Indications; Lead Party Responsibilities. Subject to [*] the Development of [*] Activators in [*] Indications, for as long as [*] such Development, the Parties [*] with respect to Development activities for [*] Indications, except that:

(i) Cytokinetics shall lead all [*] Indication Development Work, including [*] (to the extent provided in Article [*]) in connection with such Development activities, to generate [*] in the Shared Territory. Subject to Section 6.3(d)(iii), Astellas shall lead all [*] Indication Development Work, including all [*] (to the extent provided in Article [*]) in connection with such Development activities, pertaining to [*] in the Shared Territory and [*] in the Astellas Territory. For clarity, [*] for such Indication [*] such Indication and [*].

(ii) Notwithstanding anything to the contrary, including Section [*] the Party designated to lead certain [*] Indication Development Work (which includes [*] and, to the extent provided in

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Article [*] in connection with such Development activities) shall have the right to make decisions concerning the operation of such activities without the approval of the JDC as far as such activities are being conducted under the Development Plan (but shall keep the JDC reasonably informed on its conduct of such activities, at a level of detail reasonably requested by the other Party, as part of the regular JDC reporting cycle); and

(iii) In the event that [*] further right to [*] Indication Development Work for such Indication [*] shall have the [*] Indication [*], provided, however, that [*] shall consider in good faith [*] with respect to the [*] shall keep the JDC reasonably informed on its conduct of such Development activities at a level of detail [*] as part of the regular JDC reporting cycle.

6.4 Development Costs.

(a) **General.** Except as set forth in Sections 6.4(b), (c) and (d) below, Astellas shall be solely responsible for all Development Costs incurred by or on behalf of either Party in performing Development activities under the Development Plan, and shall reimburse Cytokinetics for Development Costs incurred by Cytokinetics as set forth in Section 11.3(a), to the extent [*].

(b) **Development Costs for [*] Indication Development.** [*] the Development Costs incurred by or on behalf of [*] Indication Development (the “[*] Indication Development Costs”); provided that if [*] the Development of any Compound or Collaboration Product in any [*] Indication that were the [*] Indication Development after [*] as set forth in Section [*]. The Development Costs incurred by either Party in the continued Development in such Indication [*] Indication Development shall be [*] as set forth in Section [*] above.

(c) **Development Costs in [*] Indications.** If [*] with respect to a [*] Activator and subject to the [*] set forth in Section [*] for such [*], to the extent [*] Budget as approved by the JDC [*]. [*] pursuant to Section [*]. [*] Development Costs for the [*] Indications.

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(d) Development Costs in [*] Indications. For all [*] Indications, subject to the [*] set forth in Section [*] Development Costs, provided that [*] Development Budget as approved by the JDC [*] pursuant to Section [*] Development Costs for [*] Indications, including the [*] Development activities [*] in the Shared Territory and [*] in Astellas Territory for [*] Activators in [*] Indications.

6.5 Diligence.

(a) Each Party shall use Diligent Efforts to conduct the Development activities assigned to it under the Development Plan. Without limiting the foregoing, [*]

(i) [*] set forth in the Development Plan; and

(ii) [*] (i.e., a [*] Activator or [*] Activator) and [*]. If [*] for a particular [*] at any time after the [*] immediately following the [*] will be deemed to [*] pursuant to Section [*] with respect to Compounds and Collaboration Products [*] provided that [*]. In such event, Section [*] shall apply with respect to [*] shall no longer apply with respect to [*].

(b) [*] Compound or Collaboration Product if: (i) [*] such Compound or Collaboration Product are [*] Development Plan in a [*] such Compound or Collaboration Product, and [*] in accordance with the Development Plan; or (ii) [*] such Collaboration Product.

(c) In the event of [*] Compound or Collaboration Product [*], the Parties shall [*]. In the event the [*] [*] shall be subject to [*] in accordance with [*] set forth in Section [*].

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(d) Without limiting [*] set forth herein, [*] the Development of the Lead Compound and [*] the Lead Compound. [*] the Lead Compound [*] Indication [*] shall have the right (but not the obligation) to [*] [*] Indication [*] Indication and [*] the Lead Compound [*] Indication in accordance with Section [*]. [*] such Development [*] Indication shall [*] under Section [*]

(e) Without limiting [*] set forth herein, [*] Activators for Development [*] Indications, and [*] Activators for Development [*] Indication(s). [*] pertaining to the [*] Activators, [*] Development activities [*] Activator [*] Indication, then:

(i) [*] Activators with respect to [*] Indications [*] Indications [*] Indications;

(ii) [*] Activators [*] Indications [*] notwithstanding Section [*] Indications [*] provided that [*] Development activities for a [*] Activator [*] Indication [*] Development under the Development Plan [*] Activator in any [*] Indication or any [*] Indication under this Agreement; and

(iii) [*] the Collaboration relating to [*] Activators [*] with respect to [*] Indications. [*] [*] Activators in the [*] Indications in accordance with this Section 6.5(e).

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6.6 Lead Compound Development; Advancement to Phase 2.

(a) Cytokinetics will be the Party responsible for continuing to conduct the Phase 1 Work as described in Section 6.3(b)(i). In connection therewith, Cytokinetics will continue to: (i) hold the Lead Compound IND; (ii) be the lead Party interacting with the Regulatory Authorities on matters pertaining to the Development of the Lead Compound and the Lead Product; and (iii) Manufacture and supply the Lead Compound and the Lead Product for use in such Development activities. Cytokinetics shall provide the JDC with the data and results from the Phase 1 Work on an ongoing basis.

(b) Concurrently with Cytokinetics' conduct of the Phase 1 Work, the Parties, through the JDC, shall jointly plan for the initiation of the first Phase 2 Clinical Trial for the Lead Compound by agreeing on the initial Indication to be pursued, drafting the study protocol and related documents and planning for the conduct of such Clinical Trial.

(c) Promptly following completion of the Phase 1 Work (including any additional Phase 1 Clinical Trials, PK studies, formulation work or meetings with Regulatory Authorities that may be added through amendments to the Development Plan) by Cytokinetics, and other Phase 2a enabling studies conducted by Astellas in parallel with Phase 1 Work (including any additional studies or meetings with Regulatory Authorities that may be added through amendments to the Development Plan) and in any event, [*] the JDC will determine whether or not to advance the Lead Compound into a Phase 2 Clinical Trial (currently anticipated to be a Phase 2a study). Astellas may conduct Phase 2a enabling studies for the Lead Compound in accordance with the Development Plan prior to and following the Lead Compound [*] in accordance with the Development Plan [*] as determined by the JDC (e.g., [*]). “**Lead Compound [*]**” means the [*] from the applicable [*] if the JDC determines that such [*] the Lead Compound into the first Phase 2 Clinical Trial, provided that [*] described in the initial Development Plan.

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(d) As of the Amendment Effective Date, the JDC has decided to advance the Lead Compound into a Phase 2 Clinical Trial, and as the result of such decision, Astellas shall pay to Cytokinetics the fifteen million Dollars (\$15,000,000) milestone payment set forth in Section 11.5(b)(i) for the achievement of such milestone within thirty (30) days after the Amendment Effective Date.

6.7 Development Records. Each Party shall maintain complete, current and accurate records of all Development activities conducted by it hereunder, and all data and other information resulting from such activities. Such records shall fully and properly reflect all work done and results achieved in the performance of the Development activities in good scientific manner [*]. Each Party shall document all non-clinical studies and clinical trials in formal written study reports according to applicable Laws and national and international guidelines (e.g., ICH, GCP, GLP, and GMP). Each Party shall have the right to review and copy such records maintained by the other Party at reasonable times and to obtain access to the original [*].

6.8 Data Exchange and Development Reports. In addition to adverse event and safety data reporting obligations pursuant to Section 7.5, each Party shall promptly provide the other Party with copies of all data and results generated by or on behalf of such Party in the course of performing the Development hereunder (including final reports), and including, in each case of data arising from clinical trials, [*] as the JDC may agree from time to time. The Party receiving such data shall have the right to use and reference such data to perform its obligations or to exercise its rights under this Agreement, including as set forth in Section 7.1(f). Each Party shall provide the JDC with regular reports detailing its Development for the Collaboration Products, and the results of such Development at each regularly scheduled JDC meeting. The Parties shall discuss the status, progress and results of each Party's Development at such JDC meetings.

6.9 Advisory Panels; Medical Education Activities. The Development Plan may also provide for advisory panels with key opinion leaders with respect to the Development of Collaboration Products to be held by one or both Parties. The Party organizing the advisory panel shall give the other Party written notice at least [*] in advance of any such advisory panel meetings, and the other Party shall have the right to attend such meetings. If the Parties agree to conduct non-promotional medical education activities and the JMAC has not been established at that time, the Parties shall conduct non-promotional medical education activities as part of the Development Activities under the Development Plan and under the oversight of the JDC, and [*] in connection therewith shall [*] provided that, if for any Collaboration Product, [*] such medical education activities [*] medical education activities for such Collaboration Product, then [*] shall have the right to conduct such medical education activities for such Collaboration Product under the JDC's oversight, and, [*]

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[*] such medical education activities shall be: (a) [*] medical education activities for such Collaboration Product under the Development Plan and (b) [*] such activities. If the non-promotional medical education activities [*] Compounds, the Parties shall discuss in good faith an appropriate [*] each Party. Nothing in this Section 6.9 will [*] scientific and/or medical conferences, or [*] continuing medical education activities [*] in connection with [*] Compounds.

6.10 Development Project Team. The Parties will establish a project team for each Compound (the “**Development Project Team**”) that will be responsible for managing, reviewing and implementing the performance of the day to day activities of both Parties for all stages of the Development Program for such Compound, including review and decision making regarding CMC, toxicology, clinical trial designs and regulatory filings and strategy. Each Party will have representation on the Development Project Team throughout the Development Program. The Development Project Team shall be subordinate to and governed by the JDC (except with respect to CMC issues, with respect to which the Development Project Team will be subordinate to and governed by the JMC).

ARTICLE 7 REGULATORY

7.1 Regulatory Responsibilities.

(a) The Development Plan shall set forth the regulatory strategy for seeking Marketing Approval for the Compounds and Collaboration Products by the FDA, EMA and other Regulatory Authorities in [*] as agreed upon by the Parties. [*] Development under the Development Plan (including the [*] Development), [*] necessary to obtain and maintain Regulatory Approval of the Compounds and Collaboration Products in the Collaboration Indications (for [*] Activators) or the Field (for [*] Activators) throughout the world, which activities shall be conducted using Diligent Efforts and in accordance with the regulatory strategy set forth in the Development Plan. For the Development Plan, the regulatory strategy will be set by Astellas except where [*]; in such case [*]. For the Development Plan, Cytokinetics will set the regulatory strategy for [*] and other activities [*] except when [*] in the Shared Territory [*] [*] for [*] Indications [*] in the Shared Territory, and Astellas will set the regulatory strategy for [*] Indications for the Astellas Territory. Except where [*] regulatory activities related to [*].

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(b) Cytokinetics shall hold the Lead Compound IND during the conduct of the Early Stage Work. Prior to the [*], Cytokinetics shall transfer the Lead Compound IND [*] to Astellas, unless the JDC [*] as set forth in Section 6.3(b)(iii), in which case Cytokinetics shall continue to hold the Lead Compound IND and Regulatory Materials related to such Development work.

(c) [*] Regulatory Materials for [*] Activators for [*] Indication to support the Development of such Compound in such Indications in the Shared Territory. If [*] Activator for [*] Indication or [*] Indication [*] Indication. [*] regulatory strategy in the Development Plan for [*] (but excluding [*] in the Shared Territory [*]) for such [*] Indications [*] in the Shared Territory. If [*] Indication, [*] regulatory activities related to [*] Activators for such Indication. If [*] the right to [*] a Collaboration Product in the Shared Territory [*] as set forth in Section [*] shall have the right to [*] pertaining to such Collaboration Product in the Shared Territory [*].

(d) In addition, [*] shall be responsible for [*] regulatory activities related to [*] Development (including [*] applicable Regulatory Authorities) until the JDC [*] the Development of [*] Indication under Section [*].

(e) [*] in connection with [*] under Sections 7.1(b), (c), and (d) will be [*] Indication [*] Indication [*], as applicable.

(f) Astellas hereby grants Cytokinetics and its Affiliates and (sub)licensees the right to reference any IND and other Regulatory Materials Controlled by or on behalf of Astellas

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or its Affiliates for use in the Development by Cytokinetics in accordance with this Agreement, and Cytokinetics hereby grants Astellas, its Affiliates and sublicensees the right to reference any IND for Compounds and/or Collaboration Products and other Regulatory Materials Controlled by or on behalf of Cytokinetics or its Affiliates for use in the Development by Astellas, its Affiliates and sublicensees in accordance with this Agreement. Each Party hereby grants the other Party the right to use any data resulting from such Party's activities under this Agreement to perform its obligations or to exercise its rights under this Agreement. Each Party may file its own IND(s) and other Regulatory Materials for each [*] Activator to support its Development work under this Agreement, which may cross reference the other Party's IND(s) and other Regulatory Materials for such [*] Activator.

(g) Except as set forth in Sections 7.1(b), (c) and (d) above and otherwise agreed in writing by the Parties, [*] shall be responsible, [*] for the Collaboration Products [*]. Without limiting the foregoing:

(i) Astellas shall file its own IND for the Development of the Lead Compound for the activities allocated to it under the Development Plan and Astellas shall have the right to cross reference the Lead Compound IND if necessary.

(ii) Astellas shall hold IND(s) and other Regulatory Materials for [*] Activators for each [*] Indication to support the Development of such Compound in such Indication in the Astellas Territory, and Astellas shall [*] for such Indication in the Astellas Territory.

(iii) [*] shall be responsible for regulatory activities related to [*] Activators for each [*] Indication, unless [*] for such Indication.

7.2 Cooperation. Each Party shall cooperate reasonably with the other Party with respect to key regulatory activities relating to the Compounds and Collaboration Products, shall provide such other Party with all reasonable assistance in the preparation and filing of Regulatory Materials relating to the Compounds and Collaboration Products, and shall keep such other Party reasonably and timely informed of its preparation and submission of all Regulatory Materials relating to the Compounds and Collaboration Products and the Regulatory Authorities' review of such Regulatory Materials. Without limiting the foregoing, each Party:

(a) shall consult with the other Party through the JDC or JCC, as applicable, regarding regulatory matters pertaining to [*] Regulatory Materials [*] relating to the Compounds and Collaboration Products, including plans, strategies, filings, reports, updates and supplements in connection therewith. As used herein, "[*] **Regulatory Materials**" means IND and MAA filings, [*] or materials

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that: (i) are [*] a Regulatory Authority; (ii) contain [*] such Regulatory Authority; (iii) contain [*] to such Regulatory Authority; or (iv) [*] the relevant Compound or Collaboration Product or its Development or Commercialization;

(b) shall provide the other Party with drafts of any [*] Regulatory Materials for the Compounds and Collaboration Products to be submitted by such Party to the Regulatory Authority in [*] days prior to submission for review and comment (or if [*] such as in the event of [*] by Regulatory Authority that [*] but in no event in a manner that would [*] such reporting or response), and shall consider in good faith any comments received from the other Party;

(c) shall provide the other Party with copies of [*] Regulatory Materials ([*] (as defined below)) submitted to the Regulatory Authority [*] for each calendar month as well as copies of [*] correspondence [*] received from the Regulatory Authority [*] pertaining to the Compounds and Collaboration Products for [*] Business Days [*] to a Regulatory Authority that: (i) is [*] from a Regulatory Authority or is in response to an administrative request or inquiry from a Regulatory Authority; (ii) contains [*] provided to such Regulatory Authority; (iii) contains [*] to such Regulatory Authority; (iv) [*] the receiving Regulatory Authority [*] to the relevant Compound or Collaboration Product or its Development or Commercialization; and (v) is required by Laws to be periodically filed to an existing IND or MAA. [*] includes correspondence such as [*], notifications and non-substantive amendments, but excludes all [*]; and

(d) shall provide the other Party written minutes or other records of any oral key discussions (such as Type A, Type B and Type C meetings in the U.S. and foreign similar or equivalent meetings) with the Regulatory Authority [*] pertaining to the Compounds and Collaboration Products promptly after any such discussion.

For purpose of Section 7.2, the Parties shall establish a direct line of contact between the persons responsible for the overall regulatory strategies and activities for the Collaboration Products within each Party.

If any [*] to be provided under Section [*] was originally [*] the providing Party shall provide [*] [*] to the receiving Party at the [*] except the case where such Party reasonably believes such [*] such as in the event of [*] by Regulatory Authority that [*].

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7.3 Meetings with Regulatory Authorities. Each Party shall provide the other Party with at least [*] days advance notification of key in-person meeting or teleconference (such as [*] in the U.S. and foreign similar or equivalent meetings) with the Regulatory Authorities [*] that relates to the Development of the Compounds and Collaboration Products under the Development Plan. Such other Party shall have the right, but not the obligation, to have its representatives attend (but, unless otherwise requested by the Party responsible for such meeting, not participate in) such meetings.

7.4 Product Complaints. Each Party shall be responsible for handling product complaints (except for those covered by Section 7.5 below) arising pursuant to its Development of the Compounds and Collaboration Products in compliance with all applicable Laws. Each Party shall promptly provide the other Party with written notice of any such product complaint received by such Party and arising pursuant to its Development. Upon request of either Party, the Parties shall convene a meeting to discuss such product complaint and collaborate to resolve any such product complaint. Astellas shall be responsible for handling product complaints (except for those covered by Section 7.5 below) relating to marketed Collaboration Products in compliance with all applicable Laws.

7.5 Adverse Events Reporting. At least [*] prior to the [*] Development [*] Development or as otherwise may be required to satisfy regulatory requirements, the Parties shall enter into a pharmacovigilance and adverse event reporting agreement setting forth the worldwide pharmacovigilance procedures for the Parties with respect to the Collaboration Products, such as safety data sharing, adverse events reporting and prescription events monitoring (the “**Pharmacovigilance Agreement**”). Such procedures shall be in accordance with, and enable the Parties to fulfill, local and national regulatory reporting obligations under applicable Laws. A Party responsible for the first Pivotal Registration Study for a Collaboration Product in any Collaboration Indication shall establish, prior to the Initiation of the first Pivotal Registration Study for the applicable Collaboration Product, the global safety database for the Collaboration Products, and shall maintain such global safety database for so long as such Collaboration Product is under Development and/or Commercialization hereunder. The [*] to the extent [*] such Collaboration Product for use in a Collaboration Indication. Until the First Commercial Sale of a Collaboration Product, such responsible Party shall hold the primary responsibility for reporting quality complaints, adverse events and safety data related to the Collaboration Products to such database and to the applicable Regulatory Authorities, as well as responding to safety issues and to all requests of Regulatory Authorities related to the Collaboration Products, in each case [*] and to the extent required by the applicable

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Law. If each of the Parties is separately conducting Pivotal Registration Studies for the same Collaboration Product for the same Collaboration Indication, then Astellas shall hold the primary responsibility for establishing and maintaining the global safety database for such Collaboration Product and reporting quality complaints, adverse events and safety data; provided however, that the [*]. After the First Commercial Sale of a Collaboration Product, Astellas shall hold primary responsibility for reporting quality complaints, adverse events and safety data, except during the Cytokinetics Commercialization Period, in which case Cytokinetics shall hold primary responsibility for such activities [*], unless the Parties agree otherwise in writing. After the Cytokinetics Commercialization Period, Cytokinetics will transfer the global safety data in such global safety database for such Collaboration Product to Astellas. Each Party agrees to comply with its respective obligations under the Pharmacovigilance Agreement and to cause its Affiliates, licensees and sublicensees to comply with such obligations.

7.6 Notification of Threatened Action. Each Party shall immediately notify the other Party of any information it receives regarding any threatened or pending action, inspection or communication by any Regulatory Authority, which may affect the safety or efficacy claims of any Collaboration Product or the continued marketing of any Collaboration Product. Upon receipt of such information, the Parties shall promptly consult with each other in an effort to arrive at a mutually acceptable procedure for taking appropriate action.

7.7 Remedial Actions. Each Party shall notify the other immediately, and promptly confirm such notice in writing, if it obtains information indicating that any Collaboration Product may be subject to any recall, corrective action or other regulatory action with respect to the Collaboration Product taken by virtue of applicable Law (a “**Remedial Action**”). The Parties shall fully assist each other in gathering and evaluating such information as is necessary to determine the necessity of conducting a Remedial Action. Each Party shall (and, in case of Astellas, shall ensure that its Affiliates and sublicensees shall) maintain adequate records to permit the Parties to trace the Manufacture, distribution and use of the Collaboration Products. Astellas shall have sole discretion with respect to any matters relating to any Remedial Action, including the decision to commence such Remedial Action and the control over such Remedial Action, at its cost and expense.

7.8 Collaboration Products [*]. Notwithstanding anything to the contrary in this Article 7, in the event that [*] Collaboration Product in the Shared Territory [*] pursuant to Section [*], then Sections [*] (with the Parties’ [*]) to such Collaboration Product in the Shared Territory [*].

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**ARTICLE 8
MANUFACTURING AND SUPPLY**

8.1 General. The Manufacture of the Compounds and Collaboration Products, including all process and formulation development in connection therewith, including CMC Activities, shall be overseen and coordinated by the JMC and conducted pursuant to the Manufacturing plan included in the Development Plan and the Commercialization Plan. At each regularly scheduled JMC meeting, each Party shall provide the JMC with reports summarizing its Manufacturing activities and the results of such activities and [*] Compound and Collaboration Product [*] such Party under this Agreement [*]. The Parties acknowledge that it is in the Collaboration's interest that, for each Collaboration Product under Development, the clinical trial materials for Development be made with the same process under the JMC's oversight.

8.2 Transfer of Manufacturing Know-How to Astellas.

(a) Technology Transfer. The Parties intend that [*] the Manufacture of the Compounds and Collaboration Products (including the [*]). To this end, promptly following the [*] or at the timing agreed by the JMC but in any event [*] the Compounds and Collaboration Products for the [*] and provided that the [*] Development of such [*] the JMC shall establish the procedures for Cytokinetics to effect the transfer to Astellas of the Cytokinetics Know-How that is then being used by Cytokinetics or its Third Party manufacturer in the Manufacture of the Lead Compound and Lead Products, to the extent such Cytokinetics Know-How is not already in Astellas' possession. Cytokinetics shall conduct such technology transfer as soon as practicable in accordance with such procedures, [*].

(b) Assistance. In connection with the transfer of Know-How under this Section 8.2, Cytokinetics shall provide reasonable technical assistance at Astellas' request [*]. Such technical assistance shall be included as an element of the Development Plan [*].

8.3 [*] Supply. Subject to Sections [*] shall be responsible, itself and/or through Affiliates or Third Party contract manufacturers, for the Manufacture and supply of [*] Compounds and Collaboration Products for use [*] in the Development and Commercialization under this Agreement, [*].

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8.4 [*] Supply.

(a) Notwithstanding Section [*] (i) [*] shall Manufacture and supply the [*] as agreed by the JMC, under the Development Plan and the [*] associated therewith will be [*], (ii) [*] shall have the right, but not the obligation, to Manufacture and supply the Compounds and Collaboration Products to conduct [*] Development as set forth in [*], and (iii) if [*] Activator in [*] Indication, [*] have the obligation, and [*] shall have the right, to Manufacture and supply such Compound and related Collaboration Product for use in the Development and Commercialization of such Compound and Collaboration Product in such Indication.

(b) With respect to [*] Development, [*] shall have the right to elect to either (i) [*] the applicable Compounds and Collaboration Products [*] Development if [*] Manufacturing such Compounds and Collaboration Products for [*] under the Development Plan, to be provided [*]; or (ii) [*] such Compound and/or Collaboration Products [*] in which event, [*] then being used by [*] the Manufacture of the Compounds and Collaboration Products to the extent necessary or useful for [*] Manufacture such Compounds and Collaboration Products. Promptly following [*] Development and provided that (x) the JDC [*] has determined to [*] in accordance with Section [*] and (y) [*] Manufactures or has Manufactured such Compound and/or Collaboration Products [*] for such Development work, the JMC shall [*] that is then being used [*] such Compound and such Collaboration Product, to the extent [*] is not already [*] as soon as practicable in accordance with [*]. In connection with the [*] under this Section 8.4, [*]. [*] shall be included [*] the Development Plan and [*].

(c) With respect to a [*] Activator in [*] Indication, where [*] such Indication:

(i) if [*] Manufacture and supply such Compound and related Collaboration Product for use in the Development and Commercialization of such Compound and Collaboration Product in such Indication, or if [*] Manufacture and supply [*] such Compound and Collaboration Product for such use, then such Party shall promptly notify the other Party, and [*]

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[*] then being used [*] Manufacture of such Compound and Collaboration Product to the extent [*] Manufacture such Compound and Collaboration Product. [*] Manufacture and supply such Compound and Collaboration Product [*] and for any [*] to the extent [*] to the extent that it [*] Development [*] Indication(s) and/or [*] Indication(s).

(ii) If the Parties agree, [*] Manufacture and supply, and [*], such Collaboration Product for use in the Development and Commercialization of such Collaboration Product in such Indication. In such event, [*] such Collaboration Product to the extent [*] Manufacture and supply under this Agreement (e.g., if Astellas is compensated for such Manufacture and supply [*]), and shall have [*] as set forth in Section [*]

(d) If [*] (e.g., to [*] a Compound or Collaboration Product or the Manufacture of a Compound or Collaboration Product) and [*] under Section [*] shall have the right to [*] and under the Development Plan. If [*] and the Parties [*] such Compound or Collaboration Product for a [*] Indication [*] by the Parties or [*] (i.e., [*] Indication or [*] Indication, as applicable) of the Development [*] in connection with [*].

8.5 Manufacturing Records. Each Party shall promptly provide the other Party, upon its reasonable request for the purpose of this Agreement, copies of the Manufacturing records (including specifications, protocols, batch records, master batch records and other CMC Information) maintained by the first Party, its Affiliates or Third Party contractors pertaining to Compounds and Collaboration Products for such other Party's use in connection with the Manufacture of the Compounds and/or Collaboration Products under this Agreement (and in the case of [*]). Each Party hereby grants the other Party the right to reference (and have referenced by its contract manufacturer) the Drug Master Files, if any, maintained by the first Party, its Affiliates or Third Party contractors pertaining to Compounds and Collaboration Products for such other Party's use in connection with the Manufacture of the Compounds and/or Collaboration Products under this Agreement (and in the case of [*]). For as long as [*]

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[*] Manufacture any Collaboration Product pursuant to Section [*] shall have the right to [*] such Collaboration Product [*] (it being understood such [*] the Collaboration Product so long as [*]), upon reasonable request by [*] mutually agreed upon by Astellas and Cytokinetics, provided that [*] have the right to [*]. As between the Parties, all [*] shall be deemed [*].

8.6 Manufactured Products. Each Party represents and warrants that all Compounds and Collaboration Products Manufactured and supplied by such Party for clinical trial and/or commercial use under this Agreement shall: (a) meet the applicable specifications; (b) be Manufactured in accordance with current Good Manufacturing Practices; and (c) be Manufactured in accordance with all applicable Laws, including any Governmental Authority requirements then in effect.

ARTICLE 9 COMMERCIALIZATION

9.1 General. Astellas shall have the primary responsibility, at its own expense, for all aspects of (including the conduct of) the Commercialization of the Collaboration Products in the Collaboration Indications (for [*] Activators) or the Field (for [*]) throughout the world, subject to: (a) Cytokinetics' right to Co-Promote one or more Collaboration Product(s) in the Co-Promotion Territory or Shared Territory, as applicable and as set forth below, (b) Cytokinetics' right to establish certain Commercialization strategy in [*] Indications as set forth below, (c) Cytokinetics' right to Commercialize the Collaboration Product(s) in [*] Indications in the Shared Territory during the Cytokinetics Commercialization Period, and (d) other terms and conditions of this Article 9.

9.2 Commercial Diligence.

(a) Astellas shall use Diligent Efforts to Commercialize each Collaboration Product [*]. Without limiting the foregoing, and subject to subsection (b) below, Astellas shall [*] Collaboration Product [*] such Collaboration Product [*] in order to [*] such Collaboration Product, solely to the extent [*] such Collaboration Product [*] and provided that [*] to do so (the [*]).

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(b) [*] a Collaboration Product [*] it shall give written notice to [*] together with [*] with respect to the Commercialization of such Collaboration Product [*]. The Parties shall meet and confer in good faith [*] and seek to agree on (i) [*] such Collaboration Product [*], or (ii) whether [*] such Collaboration Product [*] in accordance with Section [*]. If the Parties [*] under Section [*] such Collaboration Product [*] such Collaboration Product [*] such Collaboration Product [*] within the applicable time period. If [*] will be deemed [*] pursuant to Section [*] with respect to such Collaboration Product [*] provided that [*] within the applicable time period. If [*] will continue to [*] such Collaboration Product [*].

9.3 Commercialization Plan.

(a) No later than [*], subject to Sections 9.3(d) and 9.3(e), Astellas shall prepare and provide to the JCC for review and discussion a written plan for the Commercialization of such Collaboration Product in an Astellas' fiscal year (the "**Commercialization Plan**"). The Commercialization Plan shall include a reasonably detailed description of and anticipated timeline for the Parties', their respective Affiliates' and sublicensees' Commercialization activities with respect to such Collaboration Product, including pre-launch plans, launch plans, market analytics, product forecasts, pricing assumptions and competitive intelligence. It is the Parties' understanding that, [*] Astellas will be the Party primarily responsible for the conduct of the Commercialization activities under the Commercialization Plan. Each Party shall use Diligent Efforts to [*] of the collaboration under the Commercialization Plan (including [*]). The Parties agree that the Commercialization Plan and the applicable Commercialization strategy shall be consistent.

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(b) If Cytokinetics exercises its Co-Promotion option for a Collaboration Product, the Commercialization Plan shall also include a reasonably detailed description of and anticipated timeline for Cytokinetics' Co-Promotion activities as well as a budget therefor, which shall be consistent with Section 9.6 below.

(c) Subject to Sections 9.3(d) and 9.3(e)(ii), Astellas shall periodically (at least on an annual basis) prepare updates and amendments to its Commercialization Plan to reflect changes in its plans, including in response to changes in the marketplaces and related product forecasts, relative success of the Collaboration Products and other relevant factors influencing such plans and activities. Subject to Sections 9.3(d) and 9.3(e)(ii), Astellas shall submit all updates and amendments to its Commercialization Plan to the JCC for review and discussion. For clarity, the Commercialization budget is subject to the final determination by the JCC, subject to [*], subject to Section 9.8. Cytokinetics may perform [*] activities within the scope of its responsibilities under the Commercialization Plan, [*].

(d) The Commercialization Plan (and any amendment thereto) for any Collaboration Product (i) for a [*] Indication, (ii) for [*] Indication for which Cytokinetics exercises the Cytokinetics Co-Funding Option [*], and (iii) subject to Section 9.3(e) and Section 9.8, for [*] Indication, must be agreed by the JCC by [*]. Neither Party shall conduct any Commercialization activities that are inconsistent with such agreed-upon Commercialization Plan and any Co-Promotion Agreement.

(e) With respect to the Commercialization of a Collaboration Product in [*] Indication, subject to Section 9.8, then:

(i) If Cytokinetics has an Established Commercial Infrastructure, Cytokinetics shall have [*] for the Commercialization strategy for such Collaboration Product for such Indication in the Shared Territory (but not for the Commercialization strategies with respect to such Collaboration Product as a whole), provided however, such Commercialization strategy and the overall Commercialization Plan shall be consistent.

(ii) Regardless of [*] as relates to the portions of the Commercialization Plan for such Collaboration Product that are specific to such Indication for the Shared Territory, as well as any update and/or amendment thereof. The Commercialization strategy with respect to [*] Indications includes the following [*].

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(iii) [*] the Shared Territory and the [*] Astellas and Cytokinetics as well as the [*] such Collaboration Product for such Indication, subject to the discussion and final determination by the JCC, taking into account [*].

(iv) Notwithstanding anything to the contrary, the [*] for such Collaboration Product in such Indication in a particular country will have the decision making authority with respect [*] and other terms of sale for such Collaboration Product in such Indication for such country, provided that the other Party may conduct, [*].

(v) If [*] the Collaboration Product(s) in such [*] Indication, but the Parties have not determined which Party will [*] for the Collaboration Product(s) in such [*] Indication under Section 9.8(b), then [*] shall be responsible for the pre-commercialization activities for the Collaboration Product in such [*] Indication.

(f) Subject to Section 9.3(c), Astellas shall be solely responsible for all costs incurred by or on behalf of either Party in performing their respective obligations under the Commercialization Plan except [*] (or [*] determined by the JCC), which shall be agreed between the Parties acting reasonably and in good faith and [*], for its Co-Promotion activities as set forth in the Co-Promotion Agreement.

9.4 Patent Marking. Astellas (and Cytokinetics, if it Commercializes any Collaboration Product in the Shared Territory in [*] Indication, where [*] for such Indication) shall mark all Collaboration Products with patent information in each country in accordance with the applicable Law and to the extent customary in such country, and shall require all of its Affiliates and sublicensees to do the same. To the extent permitted by applicable Law and customary, Astellas shall indicate on Collaboration Product packaging, advertisement and promotional materials that such Collaboration Product is licensed from Cytokinetics.

9.5 Reports. Astellas (and Cytokinetics, if (a) it exercises its Co-Promotion option or (b) it Commercializes any Collaboration Product in the Shared Territory in [*] Indication, where [*] for such Indication) shall update the JCC at each regularly scheduled JCC meeting regarding its Commercialization of the Collaboration Products. Each such update shall be in a form to be agreed by the JCC and shall

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summarize its, its Affiliates' and its sublicensees' significant Commercialization activities with respect to the Collaboration Products throughout the world. The update by Astellas will be at a level of detail reasonably requested by Cytokinetics and sufficient to enable Cytokinetics to determine Astellas' compliance with its diligence obligations pursuant to Section 9.2.

9.6 Co-Promotion Option.

(a) On a Collaboration Product-by-Collaboration Product, Indication-by-Indication, [*] basis, Cytokinetics shall have the right to elect to (i) co-promote each Collaboration Product in the Co-Promotion Territory, and (ii) co-promote or promote each Collaboration Product that contains a [*] Activator for [*] Indications, and, if Astellas is the Party Commercializing such Collaboration Product, for [*] Indications, (collectively “**Neuromuscular Indications**”) in the Shared Territory, all as set forth in this Section 9.6.

(b) Unless otherwise agreed upon between the Parties, on a Collaboration Product-by-Collaboration Product, Indication-by-Indication, [*] basis, at least [*] prior to the [*] such Collaboration Product in such Indication [*] in the Co-Promotion Territory (or Shared Territory, for any Collaboration Product containing a [*] Activator in Neuromuscular Indications) as set forth in the then-current Development Plan (the “[*]”), Astellas shall provide Cytokinetics with a written confirmation that [*]. Then:

(i) If the [*] Indication or [*] Indication, then, concurrent with [*] Astellas shall provide the JCC with a [*] on: (A) the [*] such Indication [*]; and (B) the [*] Astellas and Cytokinetics, for such Collaboration Product for such Indication [*]; and (C) [*] (such matters described in (A) and (B) collectively, the “**Co-Promotion Matters**”, and such notice, the “**Astellas Co-Promotion Notice**”).

(ii) If such [*] Indication, then, within [*] pursuant to Section 9.3(e)(iii), Cytokinetics shall provide the JCC with [*] the Co-Promotion Matters for such Collaboration Product for such Indication [*], as well as a [*] (the “**Cytokinetics Co-Promotion Recommendation**”).

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(iii) The JCC shall discuss [*] on the Co-Promotion Matters (which Co-Promotion Matters shall be subject to [*] if the matter [*]), in each case within [*] after its receipt of such Astellas Co-Promotion Notice or Cytokinetics Co-Promotion Recommendation, as applicable, taking into account [*] of the Collaboration (the “**JCC Determination**”). Notwithstanding the foregoing, the JCC Determination will [*] which will be agreed by the Parties in the applicable Co-Promotion Agreement.

(iv) Within [*] after receiving the JCC Determination, Cytokinetics shall have the right to exercise its option to Co-Promote such Collaboration Product for such Indication [*] in the Co-Promotion Territory (or to Co-Promote such Collaboration Product for such Neuromuscular Indication [*] in the Shared Territory) pursuant to such JCC Determination by written notice to Astellas. If Cytokinetics fails to provide such written notice within such [*] period, then Cytokinetics shall be deemed to have elected not to exercise its Co-Promotion option for such Collaboration Product for such Indication [*].

(v) In the event [*] determines that there is a reasonable likelihood that [*] such Collaboration Product for such Indication [*] shall promptly notify [*] in writing after such determination together with [*] therefor, and the [*] obligation to [*] obligation to [*] (and the period during which [*]) shall be extended accordingly based on such [*].

(e) If Cytokinetics exercises its Co-Promotion option to co-promote a Collaboration Product for a particular Indication [*] the Co-Promotion Territory (or Shared Territory, for any Collaboration Product containing a [*] Activator in Neuromuscular Indications), unless Cytokinetics terminates the Co-Promotion in accordance with Section 9.6(e) below, its Co-Promotion efforts for such Collaboration Product in such Indication (the “**Cytokinetics Co-Promotion Effort**”) shall be determined by the JCC on a Collaboration Product-by-Collaboration Product, Indication-by-Indication [*] basis, but in any event shall be no less than [*] particular Collaboration Products for a particular Indication [*] the Co-Promotion Territory (or Shared Territory, for any Collaboration Product containing a [*] Activator in Neuromuscular Indications), unless otherwise agreed in writing by the Parties. It is the Parties’ understanding that Cytokinetics Co-Promotion Effort for the first Indication approved for any Collaboration Product in the Co-Promotion Territory [*] shall not be required to exceed [*]

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(d) If Cytokinetics exercises its Co-Promotion option [*] a Collaboration Product that contains a [*] Activator for a particular Neuromuscular Indication [*] of the Shared Territory, unless Cytokinetics terminates the Co-Promotion in accordance with Section 9.6(e) below, Cytokinetics shall be responsible for [*] for such Collaboration Product for such Neuromuscular Indication and [*] of the Shared Territory (in which case, the Cytokinetics Co-Promotion Effort shall be [*] of the promotional efforts), unless otherwise agreed in writing by the Parties. For the avoidance of doubt, the Parties acknowledge that Cytokinetics' exercise of its Co-Promotion option to [*] for the case where [*] are expected to be [*] of the Shared Territory for an Indication pursuant to the JCC Determination.

(e) If Cytokinetics exercises its Co-Promotion option for a Collaboration Product for a particular Indication [*] of the Co-Promotion Territory (or Shared Territory, for any Collaboration Product containing a [*] Activator in Neuromuscular Indications), it shall have the right to continue to Co-Promote such Collaboration Product for as long as such Collaboration Product is being sold for such Indication [*]. Cytokinetics shall have the right to relinquish its Co-Promotion rights for such Collaboration Product for such Indication [*] written notification to Astellas, in which case the Parties shall reasonably cooperate to transition to Astellas all of Cytokinetics' Co-Promotion activities with respect to such Collaboration Product for such Indication [*], so as to minimize disruption to sales activity and the Parties shall [*] for such transition. In such event, Cytokinetics shall withdraw its sales representatives from such Co-Promotion activities in a professional manner. If Cytokinetics [*] a Collaboration Product for the [*] such Collaboration Product is [*], then Cytokinetics shall have the right to [*] such Collaboration Product.

(f) If Cytokinetics exercises its Co-Promotion option for a Collaboration Product, Astellas shall [*] in the Co-Promotion Territory (or Shared Territory as applicable) based on the Cytokinetics Co-Promotion Efforts. However, if [*] for a particular Indication [*] shall so notify [*] in the applicable [*], and the Parties will discuss in good faith through the JCC [*]

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[*] Cytokinetics' exercise of its Co-Promotion option applicable to such Collaboration Product for such Indication [*]. In addition, the JCC shall take into account [*] sales force, such as [*] in each case [*].

(g) Promptly after Cytokinetics exercises its Co-Promotion option for a Collaboration Product in the Co-Promotion Territory (or Shared Territory, for any Collaboration Product containing a [*] Activator in Neuromuscular Indications), the Parties, in case of Astellas, Astellas and/or its Affiliate, as applicable, shall commence negotiations in good faith and enter into one or more co-promotion or promotion agreement(s) (the “**Co-Promotion Agreement**”) in accordance with the terms and conditions set forth in **Exhibit I** attached hereto for such Collaboration Product, allowing for any future exercise by Cytokinetics of its Co-Promotion option for the same Collaboration Product in other Indications subject to different allocation of Cytokinetics Co-Promotion efforts as applicable. The Parties shall use Diligent Efforts to enter into and execute the applicable Co-Promotion Agreement within [*] following Cytokinetics' exercise of its Co-Promotion option.

9.7 Commercial Operating Team. The JCC will establish an operating team for each Collaboration Product (the “**Commercial Operating Team**”) [*] in which Cytokinetics exercises its Co-Promotion option, which will be responsible for managing, reviewing, and implementing the performance of the day-to-day responsibilities of both Parties for all stages of the commercialization program for such Collaboration Product [*] in accordance with the Commercialization Plan, including review and decision making regarding plans for manufacture, promotion, marketing, sale, and distribution. Each Party will have representation on the Commercial Operating Team for such Collaboration Product [*] throughout the commercialization of such Collaboration Product [*] under this Agreement. The Commercial Operating Team shall be subordinate to and governed by the JCC.

9.8 Cytokinetics Commercialization Period. Notwithstanding anything to the contrary, during the Cytokinetics Commercialization Period, Cytokinetics shall be responsible (subject to subsection (b) below) for the Commercialization of Collaboration Products in the Shared Territory for each [*] Indication for which [*]:

(a) During the Cytokinetics Commercialization Period, if any, Cytokinetics shall have the sole right to Commercialize the Collaboration Product(s) in the Shared Territory, and Astellas shall have the sole right to Commercialize the Collaboration Product(s) in the Astellas Territory, in each case in accordance with the Commercialization Plan.

(b) Specifically and without limiting the foregoing, during the Cytokinetics Commercialization Period, Cytokinetics [*] sales of such Collaboration Product(s) in the

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Shared Territory if at such time: (i) Cytokinetics has an Established Commercial Infrastructure and (ii) there is [*] Collaboration Product [*] Indication, and subject to the [*] set forth in Section [*]. If the foregoing conditions are not met, then (A) Astellas will [*] of such Collaboration Product(s) in the Shared Territory, and (B) the Parties shall discuss in good faith and agree on the [*] in connection with [*] subject to the payment obligations set forth in Section [*].

(c) At the end of the Cytokinetics Commercialization Period, Astellas shall [*] of such Collaboration Product(s) for all Collaboration Indications worldwide. If Cytokinetics [*] of such Collaboration Product(s) in the Shared Territory during the Cytokinetics Commercialization Period, the Parties shall collaborate to transition the [*] such Collaboration Product(s) in the Shared Territory from Cytokinetics to Astellas pursuant to a process to be agreed to by the JCC by consensus. The Parties will endeavor to [*] Cytokinetics and to [*] of the Collaboration.

9.9 Established Commercial Infrastructure. For the purpose of this Agreement, “**Established Commercial Infrastructure**” means, with respect to Cytokinetics, it has plans to launch within [*] or has launched one or more product(s), either under this Agreement or otherwise, that address a comparable market opportunity in the applicable therapeutic area. For clarity, Cytokinetics shall be deemed to have an Established Commercial Infrastructure in a country if Cytokinetics has received Marketing Approval for Tirasemtiv in such country, is readying for the launch of or launched Tirasemtiv, or is promoting one (1) or more other product(s), either under this Agreement or otherwise, or has in place the requisite capabilities to market, sell, and distribute Tirasemtiv in any Retained Indication or a Collaboration Product for [*] Indication. In the event that [*] in accordance with [*] set forth in Section [*].

ARTICLE 10 MEDICAL AFFAIRS ACTIVITIES

10.1 General. Subject to Cytokinetics’ right to field medical science liaisons (“**MSLs**”) for one or more Collaboration Product(s) in the Co-Promotion Territory or Shared Territory, as applicable, and other terms and conditions of this Article 10, Astellas shall have the primary responsibility, at its own expense, for all aspects of the Medical Affairs Activities of the Collaboration Products in the Collaboration Indications (for [*] Activators) or the Field (for [*] Activators) throughout the world, and the Parties shall have the rights and obligations for Medical Affairs Activities for the Collaboration Products in [*] Indications, all subject to Section 10.5(b), provided, however, that if any Law is to the contrary to a Medical Affairs Activities, the Parties will discuss in good faith to reasonably fit such Medical Affairs Activities to such Law.

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10.2 Diligence. During [*] and thereafter, Astellas shall use Diligent Efforts to perform Medical Affairs Activities for each Collaboration Product [*] and to the extent appropriate [*].

10.3 Medical Affairs Plan. The Parties shall coordinate with respect to the strategy and implementation of the Medical Affairs Activities with respect to each Collaboration Product in each Indication [*] for such Indication, and such coordination will be set forth in the Medical Affairs Plan. No later than [*] Collaboration Product, Astellas shall prepare and provide to the JMAC for review and discussion a written plan for the Medical Affairs Activities for such Collaboration Product (the “**Medical Affairs Plan**”), subject to Section 10.5 below. The Medical Affairs Plan shall include a reasonably detailed description of and anticipated timeline for the Parties’, their respective Affiliates’ and sublicensees’ Medical Affairs Activities with respect to such Collaboration Product. The Medical Affairs Plan shall also include a reasonably detailed description of and anticipated timeline for Cytokinetics’ MSLs’ activities during [*] such Collaboration Product (and thereafter if Cytokinetics exercises its Co-Promotion option for such Collaboration Product or if such Collaboration Product is Developed in [*] Indication), as well as a budget therefor, which shall be consistent with Section 10.5 below. Astellas shall periodically (at least on an annual basis) prepare updates and amendments to the Medical Affairs Plan to reflect changes in its plans, subject to Section 10.5. Astellas shall submit all updates and amendments to the Medical Affairs Plan to the JMAC for review and discussion. Astellas shall be solely responsible for all costs incurred by or on behalf of either Party in performing their respective obligations under the Medical Affairs Plan and shall pay [*] as set forth in the Medical Affairs Plan, except as set forth in Section 10.5(b)(ii)(1). For clarity, [*] Medical Affairs Activities [*] each Indication will be determined by the JMAC, subject to [*]. If and when [*] MSL support for the [*] Indications [*] for the [*] Indications and/or [*] Indications. Cytokinetics may perform additional activities within the scope of its responsibilities under the Medical Affairs Plan, in addition to those funded in the JMAC-approved budget, [*] for the [*] Indication and/or [*] Indications in the Shared Territory.

10.4 Reports. Astellas (and Cytokinetics, if it exercises the right to field its own MSLs in the Co-Promotion Territory or Shared Territory pursuant to Section 10.5) shall update the JMAC at each regularly scheduled JMAC meeting regarding its Medical Affairs Activities of the

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Collaboration Products. Each such update shall be in a form to be agreed by the JMAC and shall summarize its, its Affiliates' and its sublicensees' significant Medical Affairs Activities with respect to the Collaboration Products throughout the world. The update by a Party will be at a level of detail reasonably requested by the other Party and sufficient to enable such Party to determine the other Party's compliance with its diligence obligations pursuant to Section 10.2.

10.5 Medical Scientific Liaisons.

(a) Licensed Indications and [*] Indications for Collaboration Products Containing [*] Activators; Field for all other Collaboration Products. At (i) any time after [*] Indication or [*] Indication, or (ii) any time in connection with [*] Indication or any [*] Indication, Cytokinetics shall have the right to field its own MSLs in the Co-Promotion Territory (for [*] Activators in Licensed Indications and for Collaboration Products in the Field) or Shared Territory (for [*] Activators for [*] Indications and [*] Indications), in connection with such Pivotal Registration Study. The percentage of total MSL deployment by Cytokinetics shall be agreed upon by the Parties, but in any event shall be no less than [*] and no more than [*]. If Cytokinetics exercises the Cytokinetics Co-Funding Option, the portion of the Medical Affairs Plan specific to such Collaboration Product for the [*] Indication(s) and any amendment thereto [*], and Cytokinetics may prepare [*]. If Cytokinetics exercises the option to Co-Promote pursuant to Section 9.6 in any geographic region (i.e., Canada, the US, and EU plus Switzerland), Cytokinetics shall have the right to field MSLs [*] unless the Parties otherwise agree. Such MSLs of Cytokinetics shall perform certain Medical Affairs Activities allocated to them under the Medical Affairs Plan. Astellas shall reimburse the costs and expenses incurred by Cytokinetics in fielding the MSLs, which shall be calculated at a rate equal to [*].

(b) [*] Indications. For all [*] Indications:

(i) [*] a Collaboration Product in such Indication:

(1) The terms of Section 10.5(a) shall also apply to such Indication in the Shared Territory.

(2) The portion of the Medical Affairs Plan specific to such Collaboration Product for such Indication and any amendment thereto [*], and Cytokinetics may [*].

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(3) Astellas will lead the conduct of and be responsible for the strategy for all Medical Affairs Activities with respect to such Collaboration Product in such Indication, except Cytokinetics will [*] for all Medical Affairs Activities which are specific to such Indication in the Shared Territory [*] Medical Affairs Activities with respect to such Collaboration Product [*].

(ii) [*] a Collaboration Product in any [*] Indication, thereafter:

(1) [*] the conduct of, and shall [*] Medical Affairs Activities for Collaboration Product in such Indication [*]; and

(2) [*] shall have the right, but not the obligation, to [*], and shall have [*] Medical Affairs Activities for Collaboration Product in such Indication [*].

ARTICLE 11 FINANCIAL PROVISIONS

11.1 Upfront Payment; Equity Purchase.

(a) Astellas shall pay to Cytokinetics a one-time, non-refundable, non-creditable upfront payment of sixteen million Dollars (\$16,000,000) within thirty (30) days after the Effective Date.

(b) Astellas shall pay to Cytokinetics a one-time, non-refundable, non-creditable upfront payment of thirty million Dollars (\$30,000,000) within thirty (30) days after the Amendment Effective Date.

(c) Concurrent with the execution of this Amended and Restated Agreement, Astellas and Cytokinetics have entered into a Common Stock Purchase Agreement, pursuant to which Astellas will purchase from Cytokinetics ten million Dollars (\$10,000,000) of Cytokinetics' common stock.

11.2 Reimbursement of Research Plan Costs. Astellas shall reimburse Cytokinetics' Research Plan Costs as follows:

(a) **Advance Payment.** Within [*] days of the Effective Date, Astellas shall pay to Cytokinetics an amount equal to Cytokinetics' estimated Research Plan Costs

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(as set forth in the initial Research Budget) for the then-current calendar quarter. Thereafter, during the Research Term, Cytokinetics shall submit to Astellas an invoice setting forth Cytokinetics' estimated Research Plan Costs based on the then-current Research Budget for the current calendar quarter, no later than [*] Business Days following the first day of such calendar quarter (the "**Research Advance Invoice**").

(b) True-Up. Within [*] days after the end of each calendar quarter during the Research Term, Cytokinetics shall submit to Astellas a reasonably detailed reconciliation report setting forth the actual Research Plan Costs incurred by or on account of Cytokinetics in such prior calendar quarter and any credits or deficits from the corresponding Research Advance Invoice previously provided for such quarter (the "**Research True-Up Report**"). If the estimated Research Plan Costs paid by Astellas pursuant to Section 11.2(a) above for such prior calendar quarter is less than Cytokinetics' actual Research Plan Costs for such quarter, subject to Section 5.6, Astellas shall pay the deficit to Cytokinetics as described in this Section 11.2(b). If the estimated Research Plan Costs paid by Astellas pursuant to Section 11.2(a) above for such prior calendar quarter is more than Cytokinetics' actual Research Plan Costs for such quarter, the excess shall be credited towards the Research Advance Invoice for the current calendar quarter (except where such invoice is the final such invoice to be provided by Cytokinetics, in which case the excess shall be refunded by Cytokinetics to Astellas within [*] days after the delivery of such invoice).

(c) Timing of Payment. For ease of administration, Astellas shall pay Cytokinetics a single payment reflecting the amount due under the Research Advance Invoice for the current calendar quarter plus any deficits (or less any credits) reflected in the Research True-Up Report for the prior calendar quarter within the later of (i) [*] days of Astellas' receipt of such Research Advance Invoice, or (ii) [*] days of Astellas' receipt of such Research True-Up Report.

11.3 Reimbursements and Sharing of Development Costs.

(a) Reimbursement. Astellas shall reimburse Cytokinetics' Development Costs as follows:

(i) Advance Payment. Within [*] days of the Effective Date, Astellas shall pay to Cytokinetics an amount equal to Cytokinetics' estimated Development Costs (as set forth in the initial Cytokinetics Development Budget) for the then-current calendar quarter. Thereafter, for each calendar quarter in which Cytokinetics is anticipated to conduct Development activities under the Development Plan (other than [*] Development), Cytokinetics shall submit to Astellas an invoice setting forth Cytokinetics' estimated Development Costs based on the then-current Cytokinetics Development Budget for the current calendar quarter, no later than [*] Business Days following the first day of such calendar quarter (the "**Development Advance Invoice**").

(ii) True-Up. Within [*] days after the end of each calendar quarter in which Cytokinetics has conducted Development activities under the Development Plan (other than

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[*] Development), Cytokinetics shall submit to Astellas a reasonably detailed reconciliation report setting forth the actual Development Costs incurred by or on account of Cytokinetics in such prior calendar quarter and any credits or deficits from the corresponding Development Advance Invoice previously provided for such quarter (the “**Development True-Up Report**”). If the estimated Development Costs paid by Astellas pursuant to Section 11.3(a)(i) above for such prior calendar quarter is less than Cytokinetics’ actual Development Costs for such quarter, then Astellas shall pay the deficit to Cytokinetics as described in this Section 11.3(a)(ii) to the extent such amounts do not exceed the applicable then-current [*] Budget as approved by the JDC by more than [*]. If the estimated Development Costs paid by Astellas pursuant to Section 11.3(a)(i) above for such prior calendar quarter is more than Cytokinetics’ actual Development Costs for such quarter, the excess shall be credited toward the Development Advance Invoice for the current calendar quarter (except where such invoice is the final such invoice to be provided by Cytokinetics, in which case the excess shall be refunded by Cytokinetics to Astellas within [*] days after the delivery of such invoice).

(iii) Timing of Payment. For ease of administration, Astellas shall pay Cytokinetics a single payment reflecting the amount due under the Development Advance Invoice for the current calendar quarter plus any deficits (or less any credits) reflected in the Development True-Up Report for the prior calendar quarter within the later of (1) [*] days of Astellas’ receipt of such Development Advance Invoice, or (2) [*] of Astellas’ receipt of such Development True-Up Report.

(b) Sharing of [*] Costs.

(i) If Cytokinetics has exercised the Cytokinetics Co-Funding Option, [*] for a [*] Activator in [*] Indications, then within [*] days after the end of each calendar quarter during which Astellas has incurred any [*] Costs for such [*] Activators in [*] Indications (including such costs incurred by Cytokinetics and reimbursed by Astellas under Section 11.3(a)), Astellas shall submit to Cytokinetics a reasonably detailed accounting for, and an invoice for [*] Costs incurred during such calendar quarter. Subject to subsection (ii) below, Cytokinetics shall pay to Astellas the amount invoiced within [*] days after the receipt of the invoice, to the extent such amounts do not exceed the applicable then-current [*] Budget as approved by the JDC by more than [*].

(ii) [*] subject to the following [*]: (1) [*] for its share of [*]; (2) Cytokinetics [*] at any given time; and (3) Cytokinetics [*] by more than [*] [*] is not intended to be [*] to continue to fulfill its obligations [*] (e.g., due to any modifications and/or additions to [*]. If Cytokinetics [*] any of the [*] shall be deemed [*]

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(c) Sharing of [*] Development Costs. For all [*] Indications for which [*] Activator in such Indication, then [*] Costs for such Indication as follows:

(i) Advance Payment. For each calendar quarter in which [*] Development Work for such [*] Activator in such Indication under the Development Plan, [*] shall submit to [*] an invoice setting forth [*] Costs for such [*] Activator in such Indication based on the then-current [*] Budget for the current calendar quarter, no later than [*] Business Days following the first day of such calendar quarter (the “[*] Advance Invoice”).

(ii) True-Up. Within [*] days after the end of each calendar quarter in which [*] Development Work for such [*] Activator in such Indication under the Development Plan, [*] shall submit to [*] a reasonably detailed reconciliation report setting forth the accounting for, and an invoice for [*] Development Costs for such [*] Activator in such Indication incurred by or on account of [*] in such prior calendar quarter and any credits or deficits from the corresponding [*] Advance Invoice previously provided for such quarter (the “[*] True-Up Report”). If the estimated [*] Development Costs paid by [*] pursuant to Section 11.3(c)(i) above for such prior calendar quarter is less than [*] Development Costs for such quarter, then [*] shall pay the deficit to [*] as described in this Section 11.3(c)(ii) to the extent such amounts do not exceed the applicable then-current [*] Development Budget as approved by the JDC by more than [*]. If the estimated [*] Development Costs paid by [*] pursuant to Section 11.3(c)(i) above for such prior calendar quarter is more than [*] Development Costs for such quarter, the excess shall be credited toward the [*] Advance Invoice for the current calendar quarter (except where such invoice is the final such invoice to be provided by [*] in which case the excess shall be refunded by [*] days after the delivery of such invoice).

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(iii) **Timing of Payment.** For ease of administration, [*] shall pay [*] a single payment reflecting the amount due under the [*] Advance Invoice for the current calendar quarter plus any deficits (or less any credits) reflected in the [*] True-Up Report for the prior calendar quarter within the later of (1) [*] days of [*] receipt of such [*] Advance Invoice, or (2) [*] days of [*] receipt of such [*] True-Up Report.

11.4 Reimbursement of [*] Development Costs. Astellas shall, within [*] days after the receipt of [*] Indication pursuant to Section [*], pay to Cytokinetics an amount equal to [*] Development Costs, which shall be reported to the JDC pursuant to Section [*].

11.5 Research and Development Milestone Payments.

(a) **Research Milestones.** Astellas shall pay to Cytokinetics the non-refundable, non-creditable payment set forth in the table below upon [*] achievement of each milestone event for each Compound in accordance with Section 11.5(d):

<u>Milestone Event</u>	<u>Milestone Payment</u>
[*]	[*]
[*]	[*]

(b) **Development Milestones.**

(i) **Existing Milestones.** Subject to Section 11.5(c), Astellas shall pay to Cytokinetics the non-refundable, non-creditable payment set forth in the table below upon [*] achievement of each milestone event (whether by or on behalf of

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Astellas or its Affiliates or sublicensees, or by or on behalf of Cytokinetics or its Affiliates) in accordance with Section 11.5(d):

Milestone Event	Milestone Payment			
	[*] Activator		[*] Activator	
	Lead Compound/ Lead Product	Collaboration Product containing a [*] Activator (other than the Lead Compound)	Collaboration Product containing a [*] Activator	Collaboration Product containing a [*] Activator
[*]	[*]	[*]	[*]	[*]
Initiation of CY 5012*1	\$ 2,000,000	n.a.	n.a.	n.a.
JDC's decision to enter into a Phase 2 Clinical Trial pursuant to Section 6.6(d)*1	\$15,000,000	n.a.	n.a.	n.a.
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
Total	[*]	[*]	[*]	[*]

Milestone events marked as *1 shall be referred to as “Earlier Milestone Events” and milestone events marked as *2 shall be referred to as “Later Milestone Events”.

(ii) **Additional Development Milestone for [*] Indications.** Subject to Section 11.5(c), Astellas shall pay to Cytokinetics non-refundable, non-creditable payment set forth in the table below, on a Compound-by-Compound and Indication-by-Indication

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basis, upon [*] achievement of each milestone event in [*] Indication(s) (whether by or on behalf of Astellas or its Affiliates or sublicensees, or by or on behalf of Cytokinetics or its Affiliates) in accordance with Section 11.5(d):

Milestone Event	Milestone Payment			
	For Lead Compound/ Lead Product		For each [*] Activator other than the Lead Compound	
[*]		[*]		[*]
[*]		[*]		[*]
Whether Cytokinetics exercises Cytokinetics Co-Funding Option [*]	If yes:	If no:	If yes:	If no:
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]	[*]
Total	[*]	[*]	[*]	[*]

(iii) **Additional Development Milestone for [*] Indications.** Subject to Section 11.5(c), with respect to each [*] Indication, then for so long as [*] such Indication, Astellas shall pay to Cytokinetics non-refundable, non-creditable payment set forth in the table below, on a Compound-by-Compound and Indication-by-Indication basis, upon [*] achievement of each milestone event in such Indication(s) (whether by or on behalf of Astellas or its Affiliates or

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sublicensees, or by or on behalf of Cytokinetics or its Affiliates) in accordance with Section 11.5(d):

Milestone Event	Milestone Payment	
	For Lead Compound/Lead Product	For each [*] Activator other than the Lead Compound
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
Total	[*]	[*]

(c) Interpretations of Section 11.5(b):

(i) “CY 5012” means the multiple ascending dose Phase 1 Clinical Trial for the Lead Compound as set forth in the Development Plan. For clarity, the first multiple ascending dose Phase 1 Clinical Trial for the Lead Compound conducted under the Development Plan will be deemed to be CY 5012 even if not specifically designated as CY 5012 in the Development Plan.

(ii) In the event the Parties disagree as to whether [*] the Parties shall meet and discuss in good faith. In the event the Parties cannot agree on the matter [*] in accordance with [*] set forth in Section [*].

(iii) For determination of Astellas’ payment obligations set forth in Section 11.5(b), it is confirmed that, if a particular milestone for the [*] for a particular Collaboration Product, then [*] such Collaboration Product [*] such milestone. For clarity, [*] refers to the [*] the table above, e.g., [*].

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(iv) Notwithstanding the foregoing, the [*] Collaboration Products, regardless of [*] subject to Section [*]. For clarity, the [*] Sections [*].

(v) The milestone payment obligation set forth in Section 11.5(b)(i) shall be [*]. Accordingly, and subject to Section [*] described in Section [*] Collaboration Product [*] Collaboration Products [*]

(vi) The milestones in Section 11.5(b)(i) for [*] Activators shall be payable if such milestone event is achieved in [*] and the third milestone (i.e., JDC's decision to enter into Phase 2 Clinical Trial), which may be achieved in either Licensed Indications or [*] Indications. Astellas acknowledges that such third milestone has been achieved as of the Amendment Effective Date and the corresponding milestone payment (fifteen million Dollars (\$15,000,000)) shall be paid by Astellas within thirty (30) days after the Amendment Effective Date.

(vii) The milestone payment in in Section 11.5(b)(ii) marked by the asterisk [*] Indication.

(viii) If Cytokinetics exercises the Cytokinetics Co-Funding Option [*] then each subsequent milestone payment in Section 11.5(b)(ii) will be payable upon the occurrence of the corresponding milestone event for [*] triggering such milestone payment, it being understood that the [*] triggering milestone payments [*].

(ix) If Cytokinetics does not exercise the Cytokinetics Co-Funding Option [*], then each subsequent milestone payment in Section 11.5(b)(ii) will be payable [*].

(x) The milestone payment in in Section 11.5(b)(iii) marked by the asterisk (i.e., for the [*]) will be payable [*]. [*] milestone payments in Section 11.5(b)(iii) shall be payable for [*].

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(d) Notice and Payment. Each Party shall notify the other Party in writing within [*] days after the achievement of any milestone set forth in this Section 11.5 by such Party, its Affiliates or its sublicensees. Astellas shall pay to Cytokinetics the applicable milestone payments within [*] days after the receipt of such notice from Cytokinetics (for milestones achieved by Cytokinetics, its Affiliates or (sub)licensees) or achievement of such milestone by Astellas or its Affiliates or sublicensees.

(e) [*] Indications. If the JDC [*] a Collaboration Product in a [*] Indication after [*] then Astellas shall pay to Cytokinetics:

(i) [*] set forth in the table in Section [*] upon the achievement of [*] for such Collaboration Product [*] such achievement is [*] achievement of such [*] the Collaboration Product, as well as [*] achievement of the same [*] Collaboration Product in [*] Indication; or

(ii) [*] set forth in the table in Section [*] upon the achievement of [*] for such Collaboration Product [*] achieved in [*] Indication for the Collaboration Product.

(iii) It is confirmed that:

- (A) Astellas' milestone payment under Section [*] Indication shall [*] in Section [*] and Astellas' milestone payment for [*] Indication under Section [*] in Section [*]. Astellas' milestone payment under Section [*] in Section [*];
- (B) the achievement of [*] the Collaboration Products in a [*] Indication shall not trigger Astellas' payment obligations for the [*] set forth in Section [*];
- (C) upon [*] achievement of [*] the Collaboration Products in [*] Indication (irrespective of

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whether such achievement takes place before the achievement of [*] Collaboration Product in a [*] Indication), Astellas shall make to Cytokinetics the milestone payment for [*] achievement of [*] such Collaboration Product in [*] Indication; and

- (D) achievement of [*] a Collaboration Product in a [*] Indication shall not be deemed to have achieved [*] and shall not trigger Astellas' payment obligations for [*].

11.6 Commercial Milestones.

(a) **Commercial Milestones.** Astellas shall, in accordance with Section 11.6(b), pay to Cytokinetics the one-time, non-refundable, non-creditable payments set forth in the table below when the aggregated annual (based on Astellas' fiscal year) worldwide Net Sales of all Collaboration Products first reach the values indicated below. For clarity, the milestone payments in this Section 11.6 shall [*] specified below is [*].

<u>Annual worldwide Net Sales of all Collaboration Products</u>	<u>Milestone Payments</u>
[*]	[*]
[*]	[*]
[*]	[*]
[*]	[*]

(b) **Notice and Payment.** Astellas shall notify Cytokinetics in writing within [*] days after the end of the calendar quarter during which the aggregated annual worldwide Net Sales of all Collaboration Products first reach the values set forth in Section 11.6(a) above, and shall pay to Cytokinetics the applicable milestone payments concurrent with such notice.

11.7 Royalty Payments for Products.

(a) **Royalty Rates.** Subject to the other terms of this Section 11.7, during the Royalty Term, Astellas shall make quarterly non-refundable, non-creditable royalty payments to Cytokinetics on the Net Sales of each Collaboration Product at the applicable royalty rate set forth below. Net Sales shall be aggregated on a Compound-by-Compound basis across all Indications.

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(i) [*] **Activators.** The royalty rates set forth in the table below shall apply to Collaboration Product containing [*] Activator.

Worldwide Net Sales of each Collaboration Product in an Astellas' fiscal year	Royalty Rate for Net Sales of Collaboration Product containing [*] Activator in such Astellas' fiscal year
[*]	[*]
[*]	[*]
[*]	[*]
[*]	[*]

(ii) [*] **Activator Approved for [*] Indication(s) and/or [*].** The royalty rates set forth in the table below shall apply to each Collaboration Product containing a [*] Activator, unless and until any of the royalty rates set forth in Sections 11.7(a)(iii), (iv) and (v) below become applicable to such Collaboration Product. Once any of the royalty rates set forth in Sections 11.7(a)(iii), (iv) and (v) below become applicable to such Collaboration Product, the royalty rates set forth in this Section 11.7(a)(ii) shall no longer apply.

Worldwide Net Sales of each Collaboration Product in an Astellas' fiscal year	Royalty Rate for Net Sales in such Astellas' fiscal year	Collaboration Product containing [*] Activator (other than the Lead Compound)
	Lead Product	
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

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(iii) [*] Activator Approved for [*] Indication(s) ([*] Indications). The royalty rates set forth in the table below shall apply to Collaboration Product containing a [*] Activator after the first Marketing Approval of such Collaboration Product in [*] Indication for which Cytokinetics exercises the Cytokinetics Co-Funding Option [*] for such Collaboration Product and [*] such Collaboration Product for [*] Indication.

Worldwide Net Sales of each Collaboration Product in an Astellas' fiscal year	Royalty Rate for Net Sales in such Astellas' fiscal year	
	Lead Product	Collaboration Product containing [*] Activator (other than the Lead Compound)
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

(iv) [*] Activator Approved for [*] Indication(s) and [*] Indication(s)/[*] Indication(s). The royalty rates set forth in the table below shall apply to Collaboration Product containing a [*] Activator after the first Marketing Approval of such Collaboration Product for [*] Indication (except during the Cytokinetics Commercialization Period) and provided that such Collaboration Product has obtained Marketing Approval for a [*] Indication or [*] Indication, provided that: (A) where such Collaboration Product is approved for [*] Indication, if Cytokinetics either did not exercise the Cytokinetics Co-Funding Option or [*] for such Collaboration Product, then Astellas shall have the right to [*] as set forth in Section [*]; (B) if [*] for such Collaboration Product for such approved [*] Indication(s), then Cytokinetics shall have the right to [*] as set forth in Section [*]; and (C) if both the [*] apply, then Section [*] shall apply.

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Worldwide Net Sales of each Collaboration Product in an Astellas' fiscal year	Royalty Rate for Net Sales in such Astellas' fiscal year	
	Lead Product	Collaboration Product containing [*] Activator (other than the Lead Compound)
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

(v) [*] **Activator Approved for** [*]. The royalty rates set forth in the table below shall apply to Collaboration Product containing a [*] Activator after the first Marketing Approval of such Collaboration Product for one or more [*] Indication(s) [*] such Collaboration Product obtains Marketing Approval in any [*] Indication or [*] Indication (except during the Cytokinetics Commercialization Period), provided that [*] for such Collaboration Product for any of [*] Indication(s), then [*] shall have the right to [*] as set forth in Section [*].

Worldwide Net Sales of each Collaboration Product in an Astellas' fiscal year	Royalty Rate for Net Sales in such Astellas' fiscal year	
	Lead Product	Collaboration Product containing [*] Activator (other than the Lead Compound)
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

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(vi) [*].

- (1) [*] Under circumstances where [*] has the right to [*] as set forth in this Section 11.7, and subject to Section 11.7(a)(vi)(3) below, the [*] set forth in this Section 11.7 or Section 11.8(b) shall [*] shall no longer apply.
- (2) [*] Under circumstances where [*] has the right to [*] as set forth in this Section 11.7 or Section 11.8(b), and subject to Section 11.7(a)(vi)(3) below, the [*] shall be [*] shall no longer apply.
- (3) If, for a particular Collaboration Product, [*] under Section 11.7(a)(iv), then each Party shall [*] of the applicable [*] shall have the right to [*] under Section 11.7(a)(iv) but only [*] shall have the right to [*] but only [*].
- (4) [*] means, with respect to a Collaboration Product [*] Indication(s) for which [*] for such [*] Indication. If [*]

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[*] such Collaboration Product and [*] such Collaboration Product, then the [*] such Collaboration Product [*] was deemed to have [*] such Collaboration Product pursuant to Section [*] such Collaboration Product and [*] will be included in the [*].

- (5) [*] means, with respect to a Collaboration Product which [*] one or more [*] Indication(s), the [*] Indication(s). If [*] Indication [*] Indication(s) and [*] Indication [*] such Collaboration Product [*]

(b) Royalty Term. Astellas' royalty payment obligations under this Agreement shall commence upon the First Commercial Sale of the first Collaboration Product anywhere in the world by Astellas, its Affiliates or its sublicensees, and shall continue, on a Collaboration Product-by-Collaboration Product and country-by-country basis, until the latest of (i) the expiration of the last to expire Valid Claim [*] such Collaboration Product in such country; (ii) the expiration of the last to expire Valid Claim [*] Collaboration Product, provided that [*] with respect to such Collaboration Product [*]; (iii) [the expiration of any Regulatory Exclusivity granted] with respect to such Collaboration Product in such country; and (iv) [*] years after the First Commercial Sale of such Collaboration Product in such country (the "Royalty Term").

(c) [*]

(i) If a Collaboration Product is [*] in a country during the applicable Royalty Term [*] with respect to such Collaboration Product [*], and (i) such [*] in such country [*] or (ii) such [*] for such Collaboration Product in such country [*] in such country, then the [*] of such Collaboration Product in such country [*] so long as the [*] with respect to such Collaboration Product [*] in such country [*].

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(ii) If, for a particular Collaboration Product in a particular country, [*] the First Commercial Sale of such Collaboration Product in such country: (A) there is [*] such Collaboration Product [*]; and (B) the Royalty Term set forth in Section 11.7(b) [*] such Collaboration Product [*] such Collaboration Product [*] then the applicable [*] such Collaboration Product [*] so long as the [*] in this Section 11.7(c)(ii) [*]. This Section 11.7(c)(ii) shall not operate to [*] in Section [*].

(d) Basis for Royalty. This Section 11.7 is intended to provide for payments to Cytokinetics equal to the percentages of Net Sales set forth in this Section 11.7 for the duration of the Royalty Term. In establishing this payment structure, the Parties recognize, and Astellas acknowledges, the substantial value of the various actions and investments undertaken by Cytokinetics prior to the Effective Date and that Cytokinetics will undertake under this Agreement, and that the value of the Cytokinetics Technology licensed to Astellas hereunder resides substantially in Cytokinetics Know-How. As a result, the Parties attribute such value to Cytokinetics' leading proprietary knowledge in the subject matter, including trade secrets, preclinical and clinical data pertaining to the Compounds and Collaboration Products, and regulatory filings made by Cytokinetics prior to the Effective Date, in each case created or generated by Cytokinetics through the expenditure of significant resources and as a result of Cytokinetics' unique innovative capabilities. The Parties agree that because Cytokinetics is not separately compensated under this Agreement for such additional benefits, the royalties set forth above are appropriate for the duration of the Royalty Term. The Parties have agreed to the payment structure set forth herein as a convenient and fair mechanism for both Parties in order to compensate Cytokinetics for these additional benefits as part of the overall consideration for Cytokinetics to enter into this Agreement.

(e) Royalty Reports and Payment. Within [*] days after each calendar quarter, commencing with the calendar quarter during which the First Commercial Sale of the first Collaboration Product is made anywhere in the world, Astellas shall provide Cytokinetics with a report that contains the following information for the applicable calendar quarter, on a Collaboration Product-by-Collaboration Product and country-by-country basis: (i) the amount of gross sales of the Collaboration Products, (ii) an itemized calculation of Net Sales showing deductions provided for in the definition of "Net Sales", (iii) a calculation of the royalty payment due on such sales, including [*] in accordance with Section [*] and (iv) the exchange rate for such country. Within [*] days after each calendar quarter, Astellas shall pay in Dollars all royalties due to Cytokinetics with respect to Net Sales by Astellas, its Affiliates and their respective sublicensees for such calendar quarter.

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11.8 Payments during Cytokinetics Commercialization Period. If a Collaboration Product [*] Indication(s) and [*] for a Collaboration Product in such Indication(s), then, during the Cytokinetics Commercialization Period:

(a) Shared Territory.

(i) If Cytokinetics is [*] such Collaboration Product in the Shared Territory, then [*] such Collaboration Product in the Shared Territory. Subject to agreement by the Parties regarding the [*] with respect to such Collaboration Product and [*], on a quarterly basis within [*] days after the end of each calendar quarter, [*] shall provide [*] with an itemized invoice for the [*] during such calendar quarter. [*] shall pay the amount of each such invoice within [*] days after its receipt.

(ii) If Astellas [*] of such Collaboration Product in the Shared Territory, then Astellas shall pay to Cytokinetics [*] for such Collaboration Product in the Shared Territory, which payment shall be made within [*] days after each calendar quarter and accompanied with a reasonably detailed report. Subject to agreement by the Parties regarding the [*], Astellas shall have the right to [*] during such calendar quarter. Concurrent with such payment, Astellas shall provide Cytokinetics with a report equivalent to the royalty report set forth in Section 11.7(e) and an itemized accounting for the [*].

(iii) “[*]” means, to the extent applicable and [*] in accordance with the scope of [*] agreed by the Parties: (A) [*]; (B) any related [*]; and (C) [*] to be agreed by the Parties (which will not [*]) to cover related costs incurred by Astellas. For the convenience of the Parties, the Parties may agree on [*] Cytokinetics under Section [*] with respect to [*] Collaboration Product, Cytokinetics will [*] such Collaboration Product pursuant to Section [*]

(iv) “[*]” means the [*] (A) [*] the Collaboration Product; (B) [*]; (C) [*]; and (D) a reasonable [*] Collaboration Product [*]; in each case, only to the extent [*] mutually agreed [*] shall exclude any [*] Cytokinetics.

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(v) If the Parties cannot reach agreement [*] each Party with [*] will meet in person and seek to resolve the matter prior to escalation to the JSC. If the matter is unresolved after escalation to the JSC[*] in accordance with [*] set forth in Section [*].

(b) **Astellas Territory.** If Astellas Commercializes such Collaboration Product in such Indication in the Astellas Territory, then Astellas shall make payments to Cytokinetics as follows:

(i) **During the Cytokinetics Commercialization Period.** During the Cytokinetics Commercialization Period, Astellas shall make quarterly non-refundable, non-creditable royalty payments to Cytokinetics on the Net Sales of each Collaboration Product at the applicable royalty rate set forth below. Net Sales shall be aggregated on a Compound-by-Compound basis across all Indications.

Net Sales in Astellas Territory of each Collaboration Product in an Astellas' fiscal year	Royalty Rate for Net Sales in such Astellas' fiscal year	
	Lead Product	Collaboration Product containing [*] Activator (other than the Lead Compound)
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

[*] = 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 406 of the Securities Act of 1933, as amended.

(ii) After the Cytokinetics Commercialization Period. After the Cytokinetics Commercialization Period, Astellas shall make quarterly non-refundable, non-creditable royalty payments to Cytokinetics on the Net Sales of each Collaboration Product at the royalty rates set forth in Section 11.7(a)(iv) (if Astellas has [*] Indication or [*] Indication for such Collaboration Product in the applicable country) or Section 11.7(a)(v) (if Astellas has [*] Indication or [*] Indication for such Collaboration Product in the applicable country [*] Indication in such country for which [*]), but in each case [*] shall have the right to [*] as set forth in Section [*] provided that the [*].

11.9 Currency; Exchange Rate. All payments to be made by a Party to the other Party under this Agreement shall be made in Dollars by bank wire transfer in immediately available funds to a bank account designated by written notice from the Party that receives the payment. The rate of exchange to be used in computing the amount of currency equivalent in Dollars for calculating Net Sales shall be made at the average quarterly rate as published by Bloomberg (based on 20:00 Tokyo time) for the applicable quarterly reporting period for which the payment is due, or such other source as the Parties may agree in writing. Astellas shall provide Cytokinetics with written documentation of the applicable average quarterly rate, in English, along with the applicable royalty report under Section 11.7(e).

11.10 Late Payments. If a Party does not receive payment from the other Party of any sum due to it on or before the due date therefor, simple interest shall thereafter accrue on the sum due to such receiving Party from the due date until the date of payment at a [*] or the [*].

11.11 Taxes.

(a) Taxes on Income. Each Party shall be solely responsible for the payment of all taxes imposed on its share of income arising directly or indirectly from the activities of the Parties under this Agreement.

(b) Tax Cooperation. The Parties agree to cooperate with one another and use reasonable efforts to avoid or reduce tax withholding or similar obligations in respect of royalties, milestone payments, and other payments made by a Party to the other Party under this Agreement. To the extent such paying Party is required to deduct and withhold taxes on any payment to the other Party, such paying Party shall pay the amounts of such taxes to the proper Governmental Authority in a timely manner, and the sum payable to such other Party shall be increased to the extent necessary to ensure that such other Party receives a sum equal to the sum which it would have received had there been no such withholding tax. Notwithstanding the foregoing, if the paying Party is obliged to pay withholding taxes and the other Party reasonably foresees that it will

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be able to utilize as a tax credit any amounts withheld or deducted by such paying Party, such other Party shall immediately so notify and, upon such notice, with respect to the amount in question, such paying Party will be released from the obligation to increase the amount pursuant to this Section 11.11. Such other Party shall provide such paying Party any tax forms that may be reasonably necessary in order for such paying Party to not withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty, to the extent legally able to do so. Such other Party shall use reasonable efforts to provide any such tax forms to such paying Party in advance of the due date. Each Party shall provide the other with reasonable assistance (i) to enable the recovery, as permitted by Law, of withholding taxes or similar obligations resulting from payments made under this Agreement and (ii) in connection with any audit by any tax authority relating to this Agreement. In the event the paying Party increased the amount of its payment to the other Party to account for any withholding tax, and such other Party later utilizes any such amount withheld by such paying Party to achieve any tax saving for the benefit of such other Party in the form of a tax deduction, such other Party shall notify such paying Party in writing of the amount of such tax saving and such paying Party shall have the right to credit such amount of tax saving against its future payment obligations to such other Party.

11.12 Records and Audit Rights. Each Party shall maintain complete and accurate records in sufficient detail to permit the other Party to confirm the accuracy of the amount of Research Plan Costs, Development Costs, [*] to be reimbursed, achievement of sales milestones, royalty payments and other amounts payable under this Agreement. Upon reasonable prior notice, such records shall be open during regular business hours for a period of [*] years from the creation of individual records for examination by an independent certified public accountant selected by the auditing Party and reasonably acceptable to the audited Party for the sole purpose of verifying for the auditing Party the accuracy of the financial reports furnished by the audited Party pursuant to this Agreement or of any payments made, or required to be made, by or to the audited Party pursuant to this Agreement. Such audits not occur more often than once each calendar year. Such auditor shall not disclose the audited Party's Confidential Information to the auditing Party, except to the extent such disclosure is necessary to verify the accuracy of the financial reports furnished by the audited Party or the amount of payments to or by the audited Party under this Agreement. Any amounts shown to be owed but unpaid shall be paid within [*] days after the accountant's report, plus interest (as set forth in Section 11.10) from the original due date. The auditing Party shall bear the full costs of such audit unless such audit reveals an overpayment to, or an underpayment by, the audited Party that resulted from a discrepancy in the financial report provided by the audited Party for the audited period, which underpayment or overpayment was more than [*] of the amount set forth in such report, in which case the audited Party shall reimburse the auditing Party for the costs for such audit. If any such overpayment exceeds such [*] amount, then the auditing Party will refund such amount to the audited Party within [*] days after the accountant's report. On the other hand, if any such overpayment does not exceed such [*] amount, the auditing Party shall have the right to credit the amount of such overpayment against its future payment obligations to the audited Party, provided that such future payments are expected.

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ARTICLE 12
INTELLECTUAL PROPERTY RIGHTS

12.1 Ownership of Collaboration Intellectual Property.

(a) All Collaboration Intellectual Property shall be [*]. Each Party shall [*] in any Collaboration Intellectual Property [*] the other Party, subject to [*]. To the extent any Collaboration Intellectual Property is [*] a Party, such Party shall, [*] such Collaboration Intellectual Property to the extent [*] the other Party [*]. To the extent any Patent Right [*] any Collaboration Intellectual Property [*] such Patent Right to [*].

(b) The Parties shall cooperate with respect to the filing, prosecution, maintenance and enforcement of Collaboration Patents through the JPC. This Agreement shall be deemed a joint research agreement under 35 U.S.C. §102(c) or §103(c), as applicable, and any foreign counterparts entered into for the purpose of researching, identifying and developing Compounds and Collaboration Products under the terms set forth herein.

12.2 Disclosure of Collaboration Intellectual Property. Each Party shall promptly disclose to the other Party all Collaboration Intellectual Property, including all invention disclosures or other similar documents submitted to such Party by its, or its Affiliates', directors, officers, employees, agents or independent contractors relating to such Collaboration Intellectual Property, and shall also respond promptly to reasonable requests from the other Party for additional information relating to such Collaboration Intellectual Property. Notwithstanding the foregoing, the Parties may [*] in connection with the Research Plan.

12.3 Patent Prosecution.

(a) Cytokinetics Sole Patents.

(i) Cytokinetics shall be responsible for filing, prosecuting and maintaining the Cytokinetics Patents[*]. Cytokinetics shall consult with Astellas and keep Astellas reasonably informed of the status of the Cytokinetics Patents and shall promptly provide Astellas with copies of material correspondence received from any patent

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authorities in connection therewith. In addition, Cytokinetics shall promptly provide Astellas with drafts of all proposed material filings and correspondences to any patent authorities with respect to the Cytokinetics Patents for Astellas' review and comment prior to the submission of such proposed filings and correspondences. Cytokinetics shall confer with Astellas and reasonably consider Astellas' comments prior to submitting such filings and correspondences, provided that Astellas shall provide such comments within [*] days of receiving the draft filings and correspondences from Cytokinetics. If Astellas does not provide comments within such period of time, then Astellas shall be deemed to have no comment to such proposed filings or correspondences. In case of disagreement between the Parties with respect to the filing, prosecution and maintenance of such Cytokinetics Patents, the final decision shall be made by Cytokinetics, subject to subsection (ii) below. For the purpose of this Article 12, "prosecution" shall include any post-grant proceeding including supplemental examination, post-grant review proceeding, inter parties review proceeding, patent interference proceeding, opposition proceeding, reexamination, patent term restoration (under but not limited to the U.S. Drug Price Competition and Patent Term Restoration Act), supplemental protection certificates or their equivalents, and patent term extensions.

(ii) Cytokinetics shall notify Astellas in writing of any decision to cease prosecution and/or maintenance of, any Cytokinetics Patents in any country. Cytokinetics shall provide such notice at least [*] days prior to any filing or payment due date, or any other due date that requires action in order to avoid loss of rights, in connection with such Cytokinetics Patent. Upon request by Astellas, Cytokinetics shall permit Astellas, at Astellas' discretion and expense, to continue prosecution or maintenance of such Cytokinetics Patent in such country, and for as long as Astellas assumes such prosecution and maintenance at its own costs, such Cytokinetics Patent shall be [*].

(b) Collaboration Patents.

(i) Astellas shall be responsible for filing, prosecuting and maintaining any Collaboration Patents, [*]. Astellas shall consult with Cytokinetics and keep Cytokinetics reasonably informed of the status of the Collaboration Patents and shall promptly provide Cytokinetics with copies of material correspondence received from any patent authorities in connection therewith. In addition, Astellas shall promptly provide Cytokinetics with drafts of all proposed material filings and correspondences to any patent authorities with respect to the Collaboration Patents for Cytokinetics' review and comment prior to the submission of such proposed filings and correspondences. Astellas shall confer with Cytokinetics and reasonably consider Cytokinetics' comments prior to submitting such filings and correspondences, provided that Cytokinetics shall provide such comments within [*] days of receiving the draft filings and correspondences from Astellas. If Cytokinetics does not provide comments within such period of time, then Cytokinetics shall be deemed to have no comment to such proposed filings or correspondences. In case of disagreement between the Parties with respect to the filing, prosecution and maintenance of such Collaboration Patents, the final decision shall be made by Astellas, subject to subsection (ii) below.

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(ii) Astellas shall notify Cytokinetics in writing of any decision to cease prosecution and/or maintenance of, any Collaboration Patents in any country. Astellas shall provide such notice at least [*] days prior to any filing or payment due date, or any other due date that requires action in order to avoid loss of rights, in connection with such Collaboration Patent. In such event, Astellas shall permit Cytokinetics, at its discretion and expense, to continue prosecution or maintenance of such Collaboration Patent in such country, and for as long as Cytokinetics assumes such prosecution and maintenance at its own costs, such Collaboration Patent shall be [*].

(c) Astellas Patents.

(i) Astellas shall be responsible for filing, prosecuting and maintaining the Astellas Patents, [*]. Astellas shall keep Cytokinetics reasonably informed of the status of the Astellas Patents.

(ii) Astellas shall notify Cytokinetics in writing of any decision to cease prosecution and/or maintenance of, any Astellas Patents in any country. Astellas shall provide such notice at least [*] days prior to any filing or payment due date, or any other due date that requires action in order to avoid loss of rights, in connection with such Astellas Patent. In such event, Astellas shall permit Cytokinetics, at its discretion and expense, to continue prosecution or maintenance of such Astellas Patent in such country and, after such notice by Astellas, such Astellas Patent shall be [*].

(d) Collaboration. When a Party assumes the responsibilities for the prosecution and maintenance of a Patent under Section 12.3(a)(ii), 12.3(b)(ii), 12.3(c)(ii) or 14.3(c), the other Party shall promptly transfer to such Party the patent prosecution files for such Patent and provide reasonable assistance in the transfer of the prosecution responsibilities. The Party assuming such prosecution and maintenance responsibilities shall have the right to engage its own counsel to do so.

12.4 Patent Enforcement.

(a) Each Party shall notify the other within [*] Business Days of becoming aware of any alleged or threatened infringement by a Third Party of any of the Cytokinetics Patents, Astellas Patents or Collaboration Patents, which infringement adversely affects or is expected to adversely affect the Development or Commercialization of any Collaboration Product, including any “patent certification” filed in the United States under 21 U.S.C. §355(b)(2) or 21 U.S.C. §355(j)(2) or similar provisions in other jurisdictions and of any declaratory judgment, opposition, or similar action alleging the invalidity, unenforceability or non-infringement of any of the Cytokinetics Patents, Astellas Patents or Collaboration Patents (collectively “**Product Infringement**”).

(b) Astellas shall have the first right to bring and control any legal action in connection with any Product Infringement at its own expense as it reasonably determines appropriate, and Cytokinetics shall have the right to be represented in any such action by counsel of its choice. Astellas shall provide Cytokinetics and its counsel with copies all court filings and

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material supporting documentation, and, at the request of Cytokinetics, reasonable access to Astellas' counsel for consultation, provided that, unless Cytokinetics is joined as a party to such action, any counsel retained by Cytokinetics shall not act as attorney of record for any such action, or conduct any legal proceedings as part of such action, unless specifically requested by Astellas and at Astellas' expense. If Astellas decides not to bring such legal action, it shall so notify Cytokinetics promptly in writing and Cytokinetics shall have the right to bring and control any legal action in connection with such Product Infringement at its own expense as it reasonably determines appropriate after consultation with Astellas.

(c) Cytokinetics shall have the exclusive right to enforce the Cytokinetics Patents for any infringement that is not a Product Infringement at its own expense as it reasonably determines appropriate. Astellas shall have the exclusive right to enforce the Astellas Patents for any infringement that is not a Product Infringement at its own expense as it reasonably determines appropriate. Each Party shall have the right to enforce the Collaboration Patents for any infringement that is not a Product Infringement at its own expense as it reasonably determines appropriate.

(d) At the request of the Party bringing the action, the other Party shall provide reasonable assistance in connection therewith, including by executing reasonably appropriate documents, cooperating in discovery and joining as a party to the action if required.

(e) In connection with any such proceeding, the Party bringing the action shall not enter into any settlement admitting the invalidity of, or otherwise impairing the other Party's rights in, the Cytokinetics Patents, Astellas Patents or Collaboration Patents without the prior written consent of the other Party.

(f) Any recoveries resulting from enforcement action relating to a claim of Product Infringement shall be first applied against payment of each Party's costs and expenses in connection therewith. Any such recoveries in excess of such costs and expenses (the "**Remainder**") shall be [*] provided that if the Product Infringement involves a Collaboration Product in [*] Indication [*] in the Shared Territory, and [*] for such Indication, the Remainder shall be paid to [*]. Any Remainder [*] in accordance with Section [*].

12.5 Trademarks.

(a) Except as set forth in Section 12.5(b) below, Astellas shall have the right to brand the Collaboration Products using any trademarks and trade names it determines appropriate for the Collaboration Products, which may vary by country or within a country ("**Product Marks**"). Astellas shall own all rights in the Product Marks and shall register and maintain the

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Product Marks in the countries and regions that it determines reasonably necessary, at Astellas' cost and expense. If Cytokinetics exercises its Co-Promotion option for a Collaboration Product, Astellas shall mark such Collaboration Product in the Co-Promotion Territory (or Shared Territory, as applicable) with logos of both Astellas and Cytokinetics in equal prominence.

(b) If Cytokinetics is Commercializing a Collaboration Product in an [*] Indication during the Cytokinetics Commercialization Period, Cytokinetics shall have the right to brand such Collaboration Product in the Shared Territory using any trademarks and trade names it determines appropriate for the Collaboration Products, which may vary by country or within a country (the "**Cytokinetics Product Marks**"). Cytokinetics shall own all rights in the Cytokinetics Product Marks and shall register and maintain the Cytokinetics Product Marks in the countries and regions in the Shared Territory that it determines reasonably necessary, at Cytokinetics' cost and expense. After the Cytokinetics Commercialization Period, Astellas has the right to take over the Cytokinetics Product Marks (but not Cytokinetics' name or its corporate marks) from Cytokinetics in the countries and regions in the Shared Territory without any additional compensation to Cytokinetics, provided that Astellas shall bear any costs and expenses incurred in connection with such transfer.

ARTICLE 13 CONFIDENTIALITY; PUBLICATION

13.1 Duty of Confidence. Subject to the other provisions of this Article 13:

(a) all Confidential Information of a Party (the "**Disclosing Party**") shall be maintained in confidence and otherwise safeguarded by the other Party (the "**Receiving Party**") and its Affiliates, using Diligent Efforts, but in any event no less than in the same manner and with the same protections as the Receiving Party maintains its own confidential information;

(b) the Receiving Party may only use any such Confidential Information for the purposes of performing its obligations or exercising its rights under this Agreement; and

(c) the Receiving Party may disclose Confidential Information of the other Party to: (i) its Affiliates and sublicensees; and (ii) officers, employees, directors, agents, contractors, consultants and advisers of the Receiving Party and its Affiliates and sublicensees, in each case to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; provided that such Persons are bound by legally enforceable obligations to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

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13.2 Exceptions. The foregoing obligations as to particular Confidential Information of a Disclosing Party shall not apply to the extent that the Receiving Party can demonstrate through competent evidence that such Confidential Information:

(a) is known by the Receiving Party at the time of its receipt without an obligation of confidentiality, and not through a prior disclosure by the Disclosing Party, as documented by the Receiving Party's business records;

(b) is in the public domain before its receipt from the Disclosing Party, or thereafter enters the public domain through no fault of the Receiving Party;

(c) is subsequently disclosed to the Receiving Party by a Third Party who may lawfully do so and is not under an obligation of confidentiality to the Disclosing Party; or

(d) is developed by the Receiving Party independently and without use of or reference to any Confidential Information received from the Disclosing Party, as documented by the Receiving Party's business records.

No combination of features or disclosures shall be deemed to fall within the foregoing exclusions merely because individual features are published or available to the general public or in the rightful possession of the Receiving Party, unless the combination itself and principle of operation are published or available to the general public or in the rightful possession of the Receiving Party.

13.3 Authorized Disclosures. Notwithstanding the obligations set forth in Sections 13.1 and 13.5, a Party may disclose the other Party's Confidential Information (including this Agreement and the terms herein) to the extent:

(a) such disclosure: (i) is reasonably necessary for the filing or prosecuting Patent Rights as contemplated by this Agreement; (ii) is reasonably necessary in connection with regulatory filings for Collaboration Products; (iii) is reasonably necessary for the prosecuting or defending litigation as contemplated by this Agreement; or (iv) is made to any Third Party bound by written obligation of confidentiality and non-use substantially consistent with to those set forth under this Article 13 (subject to subsection (b) below with respect to [*]), to the extent otherwise necessary or appropriate in connection with the exercise of its rights or the performance of its obligations hereunder;

(b) such disclosure is to [*], does not include the disclosure of Confidential Information relating to [*], and otherwise meets the requirements of subsection (a) above, in which case the Party [*] may agree with [*] of no less than [*] and in any event no less than [*]. Notwithstanding the foregoing, the subcontracting Party may request that the other Party grant a waiver to such requirement, which waiver shall not be unreasonably withheld or delayed and may be provided by e-mail. Each Party agrees to use Diligent Efforts to respond to a request for such a waiver within [*] Business Days.

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(c) such disclosure is reasonably necessary: (i) to such Party's directors, attorneys, independent accountants or financial advisors for the sole purpose of enabling such directors, attorneys, independent accountants or financial advisors to provide advice to such Party, provided that in each such case on the condition that such directors, attorneys, independent accountants and financial advisors are bound by confidentiality and non-use obligations substantially consistent with those contained in this Agreement; or (ii) to actual or potential investors, acquirors, (sub)licensees and other financial or commercial partners solely for the purpose of evaluating or carrying out an actual or potential investment, acquisition or collaboration; provided that in each such case on the condition that such Persons are bound by confidentiality and non-use obligations substantially consistent with those contained in the Agreement; or

(d) such disclosure is required by judicial or administrative process, provided that in such event such Party shall promptly notify the other Party in writing of such required disclosure and provide the other Party an opportunity to challenge or limit the disclosure obligations. Confidential Information that is disclosed by judicial or administrative process shall remain otherwise subject to the confidentiality and non-use provisions of this Article 13, and the Party disclosing Confidential Information pursuant to law or court order shall take all steps reasonably necessary, including seeking of confidential treatment or a protective order, to ensure the continued confidential treatment of such Confidential Information.

13.4 Publications. The JMAC (and prior to the establishment of the JMAC, the JRC (for Research-related publications) or the JDC (for Development-related publications)) (each of the JRC, JDC and the JMAC, the "**Responsible Committee**") shall establish publication review and approval procedures for this Collaboration consistent with the publication policies of both Parties. The Parties shall review and approve any publication by either Party or its Affiliates or (sub)licensees relating to the Compounds or Collaboration Products, including scientific, health economic or pharmacoeconomic publications, in accordance with such procedures, considering Astellas' and Cytokinetics' interest in publishing the results of the work in the Research, Development, and Medical Affairs Activities in order to obtain recognition within the scientific or other applicable community and to advance the state of knowledge in the field, the need to protect Confidential Information and the Parties' mutual interest in obtaining valid patent protection, protecting reasonable business interests and trade secret information, and having an integrated approach to developing one or more Collaboration Products for one or more Indications. Consequently, except for disclosures permitted pursuant to Sections 13.3 and 13.5, each Party and their Affiliates, employee(s) and consultant(s) shall deliver to the Responsible Committee for review and comment a copy of any proposed publication or presentation that pertains to any Compound or Collaboration Product, pursuant to a procedure to be established by the Responsible Committee (but excluding general corporate publications and presentations), any such comments to be provided within [*] days of receipt. The Responsible Committee shall have the right to require modifications of the publication or presentation: (a) to protect each Parties' respective Confidential Information; (b) for trade secret reasons or business reasons; and/or (c) to delay such submission for an additional [*] days as may be reasonably necessary to seek patent protection for the information disclosed in such proposed submission.

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13.5 Publicity; Use of Names.

(a) The Parties have agreed on language of a joint press release announcing the restatement of the Agreement, which is attached hereto as **Exhibit J**, to be issued by the Parties promptly after the Amendment Effective Date. No other disclosure of the existence or the terms of this Agreement may be made by either Party or its Affiliates except as provided in Section 13.3 and this Section 13.5. No Party shall use the name, trademark, trade name or logo of the other Party, its Affiliates or their respective employees in any publicity, promotion, news release or disclosure relating to this Agreement or its subject matter, except as provided in this Section 13.5 or with the prior express written permission of the other Party, except as may be required by applicable Law.

(b) A Party may disclose this Agreement in securities filings with the Securities Exchange Commission (the “SEC”) or equivalent foreign agency to the extent required by applicable Law. In such event, the Party seeking such disclosure shall prepare a proposed redacted version of this Agreement to request confidential treatment for this Agreement, and the other Party agrees to promptly (and in any event, no less than [*] Business Days after receipt of such proposed redactions) give its input in a reasonable manner in order to allow the Party seeking disclosure to file its request within the time lines prescribed by applicable Law. The Party seeking such disclosure shall reasonably consider any comments thereto provided by the other Party within such [*] Business Day period.

(c) Each Party acknowledges that the other Party may be legally required to make public disclosures (including in filings with the Governmental Authorities or by issuing a press release) of certain terms of or material developments or material information generated under this Agreement and agrees that each Party may make such disclosures as required by Law, provided that the Party seeking such disclosure first provides the other Party a copy of the proposed disclosure, and shall reasonably consider any comments thereto provided by the other Party within [*] days after the receipt of such proposed disclosure, provided that in no event shall the Party having such disclosure obligation be required to delay its disclosure in a manner that may cause such Party to violate any Law or incur any legal liability.

(d) Other than the press release set forth in **Exhibit J** and any press release issued pursuant to Section 13.5(c), the Parties agree that the portions of any other news release or other public announcement relating to this Agreement or the performance hereunder that would disclose information other than that already in the public domain, shall first be reviewed and approved by both Parties (with such approval not to be unreasonably withheld or delayed); provided, however, that notwithstanding the foregoing, Cytokinetics shall have the right to disclose publicly (including on its website): (i) the fact that it has entered into this Agreement; (ii) the commencement, progress, status, completion and key results of each clinical trials conducted by the Parties under this Agreement; (iii) the receipt of any milestone payments under this Agreement; (iv) Marketing Approval of any Collaboration Product; (v) the First Commercial Sale of any Collaboration Product; and (vi) royalties received from Astellas. For each such disclosure, unless Cytokinetics otherwise has the right to make such disclosure under this Article 13, Cytokinetics shall provide Astellas with a draft of such disclosure at least [*] Business Days prior

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to its intended release for Astellas' review and comment, and shall consider Astellas' comments in good faith. If Cytokinetics does not receive comments from Astellas within [*] Business Days, Cytokinetics shall have the right to make such disclosure without further delay. The Parties shall use reasonable efforts to coordinate the timing of such disclosures to be outside the trading hours of the NASDAQ and Tokyo stock markets, provided that neither Party shall be required to so delay such a disclosure where such delay would reasonably be expected to give rise to liability for or sanctions upon such Party in such Party's sole judgment.

(e) The Parties agree that after a disclosure pursuant to Section 13.5(b), a press release (including the initial press release) or other public announcement pursuant to Section 13.5(c) has been reviewed and approved by the other Party, either Party may make subsequent public disclosures reiterating such information without having to obtain the other Party's prior consent or approval.

(f) Each Party agrees that the other Party shall have the right to use such first Party's name and logo in presentations, the company's website, collateral materials and corporate overviews to describe the collaboration relationship, as well as in taglines of press releases issued pursuant to this Section 13.5.

13.6 Attorney-Client Privilege. Neither Party is waiving, nor shall be deemed to have waived or diminished, any of its attorney work product protections, attorney-client privileges or similar protections and privileges or the like as a result of disclosing information pursuant to this Agreement, or any of its Confidential Information (including Confidential Information related to pending or threatened litigation) to the Receiving Party, regardless of whether the Disclosing Party has asserted, or is or may be entitled to assert, such privileges and protections. The Parties: (a) share a common legal and commercial interest in such disclosure that is subject to such privileges and protections; (b) are or may become joint defendants in proceedings to which the information covered by such protections and privileges relates; (c) intend that such privileges and protections remain intact should either Party become subject to any actual or threatened proceeding to which the Disclosing Party's Confidential Information covered by such protections and privileges relates; and (d) intend that after the Effective Date both the Receiving Party and the Disclosing Party shall have the right to assert such protections and privileges.

ARTICLE 14 TERM AND TERMINATION

14.1 Term. The term of this Agreement shall commence upon the Effective Date and continue in full force and effect, on a Collaboration Product-by-Collaboration Product basis, until the expiration of the Royalty Term with respect to the applicable Collaboration Product, unless earlier terminated as set forth in Section 14.2 below (the "**Term**"). Upon expiration of the Royalty Term with respect to such Collaboration Product in such country, the license granted to Astellas under this Agreement with respect to such Collaboration Product in such country shall remain in effect on a perpetual, fully paid-up and royalty-free basis.

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14.2 Termination.

(a) Termination by Astellas for Convenience. At any time after the expiration of the Research Term, Astellas may terminate this Agreement for convenience in its entirety or on a [*] basis by providing written notice of termination to Cytokinetics, which notice includes an effective date of termination at least one hundred eighty (180) days after the date of the notice. [*].

(b) Termination for Material Breach. If either Party believes that the other is in material breach of its obligations hereunder or material breach of any representation or warranty set forth in this Agreement, then the non-breaching Party may deliver notice of such breach to the other Party. For all breaches other than a failure to make a payment as set forth in this Agreement, the allegedly breaching Party shall have [*] days from such notice to dispute or cure such breach. For any breach arising from a failure to make a payment set forth in this Agreement, the allegedly breaching Party shall have [*] days from the receipt of the notice to dispute or cure such breach. If the Party receiving notice of breach fails to cure, or fails to dispute, that breach within the applicable period set forth above, then the Party originally delivering the notice of breach may terminate this Agreement effective on written notice of termination to the other Party. If the allegedly breaching Party in good faith disputes such material breach or disputes the failure to cure or remedy such material breach and provides written notice of that dispute to the other Party within the applicable period set forth above, the matter shall be addressed under the dispute resolution provisions in Section 17.6(a), and the termination shall not become effective unless and until it has been determined under Section 17.6(a) that the allegedly breaching Party is in material breach of this Agreement. Notwithstanding the foregoing, if the material breach [*] and provided that such material breach [*] under this Section 14.2(b) shall be [*] set forth in Section [*] with respect to such [*] except as provided in Section [*].

(c) Termination for Patent Challenge. Except to the extent the following is unenforceable under the laws of a particular jurisdiction, Cytokinetics may terminate this Agreement if Astellas or its Affiliates or sublicensees, individually or in association with any other person or entity, commences a legal action challenging the validity, enforceability or scope of any Cytokinetics Patents.

(d) Termination for Bankruptcy. Either Party may terminate this Agreement, if, at any time, the other Party files in any court or agency pursuant to any statute or regulation of any state, country or jurisdiction, a petition in bankruptcy or insolvency or for reorganization or for an arrangement or for the appointment of a receiver or trustee of such other Party or of its assets, or

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if the other Party proposes a written agreement of composition or extension of its debts, or if the other Party is served with an involuntary petition against it, filed in any insolvency proceeding, and such petition shall not be dismissed within [*] days after the filing thereof, or if the other Party proposes or is a party to any dissolution or liquidation, or if the other Party makes an assignment for the benefit of its creditors.

14.3 Effect of Termination. Upon the termination (but not expiration) of this Agreement for any reason, all licenses and other rights granted to Astellas under the Cytokinetics Technology and Collaboration Intellectual Property shall terminate. In the case of a partial termination under Section 14.2(a) or 14.2(b), such licenses and rights will terminate solely with respect to [*]. In addition, the following consequences shall apply in the event of termination by Astellas pursuant to Section 14.2(a) or by Cytokinetics pursuant to Section 14.2(b), 14.2(c) or 14.2(d):

(a) [*] Products. Within [*] days after the effective date of termination, [*] Collaboration Products containing a [*] (the “[*] Products”). In addition, Astellas [*] Products. [*].

(b) [*] Products. [*] (i) in the event this Agreement is terminated with respect to [*] (other than [*] Product), such [*] Product; and/or (ii) in the event this Agreement is terminated with respect to [*] Products containing such [*] (other than [*] Product(s)), in each case in the Field [*] (such [*] Products, the “[*] Products”, and collectively with [*] Products, the “[*] Products”). [*] Products (other than any [*] Product) as follows:

(i) if on the effective date of such termination, the Parties have [*] for such [*] Product [*];

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- (ii) if on the effective date of such termination, the Parties have [*] for such [*] Product but have [*] for such [*] Product [*];
 - (iii) if on the effective date of such termination, the Parties have [*] for such [*] Product but have [*] for such [*] Product [*];
 - (iv) if on the effective date of such termination, the Parties have [*] for such [*] Product but have [*] for such [*] Product [*]; and
 - (v) if on the effective date of such termination, the Parties have [*] for such [*] Product and [*] for such [*] Product [*].

In such event, Sections [*] shall apply to [*] (adjusted for [*]), and Section [*] shall no longer apply to the [*] Products. Cytokinetics may [*] by written notice to Astellas.

(c) Patent Prosecution and Enforcement. After the effective date of termination, Astellas shall promptly transfer to Cytokinetics, and Cytokinetics shall thereafter be solely responsible for, the prosecution and maintenance of Collaboration Patents that are [*] under Section [*] under Section [*]. Cytokinetics shall have the first right to enforce at Cytokinetics' sole cost the Collaboration Patents that are [*] under Section [*] and the Collaboration Patents that are [*] under Section [*], in each case against any infringement that adversely affects or is expected to adversely affect any [*] Product.

(d) Regulatory Materials; Data. Within thirty (30) days of the effective date of such termination, Astellas shall transfer and assign to Cytokinetics, at no cost to Cytokinetics, all Regulatory Materials relating to any [*] Products, data from preclinical, non-clinical and clinical studies conducted by or on behalf of Astellas, its Affiliates or sublicensees relating to any [*] Products and all pharmacovigilance data (including all adverse event databases) relating to any [*] Products. At Cytokinetics' request, Astellas shall provide Cytokinetics with assistance with any inquiries and correspondence with Regulatory Authorities relating to any [*] Product for a period of [*] months after such termination.

[*] = **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 406 of the Securities Act of 1933, as amended.**

(e) Trademarks. Astellas shall transfer and assign, and shall ensure that its Affiliates transfer and assign, to Cytokinetics, at no cost to Cytokinetics, all Product Marks relating to any [*] Product and any applications therefor (excluding any such marks that include, in whole or part, any corporate name or logos of Astellas or its Affiliates or sublicensees). Cytokinetics and its Affiliates and licensees shall have the right to use other identifiers specific to such [*] Product (e.g., Astellas compound identifiers). Astellas shall also transfer to Cytokinetics any in-process applications for generic names for any [*] Product.

(f) Transition Assistance. Astellas shall provide the following transitional assistance, at its own cost unless specifically set forth below.

(i) If this Agreement is terminated in its entirety, Astellas shall promptly return to Cytokinetics all Know-How, data, materials and other Confidential Information made available to Astellas by Cytokinetics under this Agreement.

(ii) Upon request by Cytokinetics after termination of this Agreement, Astellas shall promptly provide Cytokinetics with a copy of each license agreement, collaboration agreement and/or vendor agreement then effective between Astellas (or its Affiliates) and a Third Party with respect to any [*] Product, or the Development, Manufacture and Commercialization thereof. Upon Cytokinetics' request, Astellas shall use its Diligent Efforts to assign or sublicense, and shall ensure that its Affiliates assign or sublicense, to Cytokinetics any such agreement(s) and shall permit Cytokinetics access through any communication portal so established with such Third Party under any agreement so assigned to Cytokinetics.

(iii) Astellas shall, at Cytokinetics' request after termination of this Agreement, transfer (including when available, in electronic format) all Astellas Know-How and Collaboration Know-How relating to any [*] Products to Cytokinetics or its designee, including without limitation: study protocols, study results, analytical methodologies, CMC Information (including bulk and final product manufacturing processes, batch records, vendor information and validation documentation), expert opinions, analyses, in each case to the extent such materials pertain to any [*] Products, and shall provide Cytokinetics reasonable technical assistance in connection therewith. From and after such time, all such Know-How shall be deemed Confidential Information of Cytokinetics.

(iv) Astellas shall transfer to Cytokinetics or its designee any and all inventory of [*] Products (including all research materials, final product, bulk drug substance, intermediates, work-in-process, formulation materials, reference standards, drug product clinical reserve samples, packaged retention samples, and the like) then in the possession of Astellas, its Affiliates or sublicensees at Astellas' Manufacturing Costs. Astellas shall continue or have continued any ongoing stability studies pertaining to any materials so transferred if such studies will take less than [*] to complete. The Parties will agree on the procedures by which to transfer any longer stability studies to Cytokinetics or its designee in a manner that minimizes the disruption of such studies.

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(v) If at the time of such termination, Cytokinetics or its Affiliates are not Manufacturing a particular [*] Product, then, at Cytokinetics' request, Astellas shall: (A) continue to Manufacture and supply Cytokinetics with such [*] Product at [*] for a period of [*] year after such termination; (B) assign or transfer to Cytokinetics any Manufacturing agreement between Astellas and a Third Party contract manufacturer with respect to such [*] Product; and/or (C) transfer to Cytokinetics (or its designee) all Know-How and materials to enable Cytokinetics or such designee to assume the Manufacture and supply of such [*] Product and shall provide reasonable technical assistance in connection therewith;

(vi) If at the time of such termination, Astellas or its Affiliates are conducting any clinical trials for a [*] Product, then, at Cytokinetics' election on a trial-by-trial basis: (A) Astellas shall fully cooperate, and shall ensure that its Affiliates fully cooperate, with Cytokinetics to transfer the conduct of all such clinical trials to Cytokinetics. [*] the conduct of such clinical trials after the effective date of such termination (except to the extent [*]); or (B) Astellas shall, [*], orderly wind-down the conduct of any such clinical trial which is not assumed by Cytokinetics under clause (A). In each case [*] in connection with the conduct or wind-down of all such clinical trials as of the effective date of such termination.

(vii) In addition to the foregoing, Astellas shall use its Diligent Efforts with respect to those activities for which it is responsible to ensure orderly transition and uninterrupted Development, Manufacturing, Commercialization and Medical Affairs Activities of [*] Products by Cytokinetics and to enable Cytokinetics to enter into an agreement with a Third Party to continue these activities with minimal disruption and delay.

(viii) Astellas shall transfer to Cytokinetics all rights to publications relating to any [*] Products (including data to be published, manuscript in preparation and pending publications).

(g) **Termination Press Releases.** In the event of termination of this Agreement for any reason and subject to the provisions of Section 13.5, the Parties shall cooperate in good faith to coordinate public disclosure of such termination and the reasons therefor, and shall not, except to the extent required by applicable Law, disclose such information without the prior approval of the other Party. The principles to be observed in such disclosures shall be accuracy, compliance with applicable Law and regulatory guidance documents, and reasonable sensitivity to potential negative investor reaction to such news.

14.4 Survival. Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Without limiting the foregoing, the provisions of Articles 1, 11 (solely with respect to payments accrued before the date of

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expiration or termination or [*]), 16 (solely with respect to Claims arising from actions and/or omissions during the Term) and 17, and Sections 3.4(f), 3.6(f), 3.8, 5.8, 8.6, 12.1(a), 12.1(b) (the second sentence only), 12.3(c), 12.3(d), 13.1, 13.2, 13.3, 13.5, 13.6, 14.3, 14.4, 14.5 and 15.5 shall survive the expiration or termination of this Agreement.

14.5 Termination Not Sole Remedy. Termination is not the sole remedy under this Agreement and, whether or not termination is effected and notwithstanding anything contained in this Agreement to the contrary, all other remedies shall remain available except as agreed to otherwise herein.

ARTICLE 15 REPRESENTATIONS AND WARRANTIES

15.1 Representations and Warranties of Each Party. Each Party represents and warrants to the other Party as of the Effective Date that:

(a) it is duly organized and validly existing under the laws of its jurisdiction of incorporation or formation, and has full corporate or other power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) it has the full right, power and authority to enter into this Agreement, to perform its obligations hereunder; and

(c) this Agreement has been duly executed by it and is legally binding upon it, enforceable in accordance with its terms, and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

15.2 Representations and Warranties by Cytokinetics. Cytokinetics represents and warrants to Astellas as of the Effective Date that:

(a) it has not previously assigned, transferred, conveyed or otherwise encumbered its right, title and interest in Cytokinetics Patents listed in Exhibit C in a manner that is inconsistent with the license granted to Astellas under Section 3.1;

(b) to Cytokinetics' knowledge, all Cytokinetics Patents are listed in Exhibit C;

(c) it has the right to grant the license and rights herein to Astellas and it has not granted any license, right or interest in, to or under the Cytokinetics Patents listed in Exhibit C to any Third Party that is inconsistent with the license granted to Astellas under Section 3.1;

(d) it has not received any written notice from any Third Party asserting or alleging that (i) the development of Cytokinetics Patents listed in Exhibit C prior to the Effective Date or (ii) the practice of any Cytokinetics Know-How that is contemplated to be utilized in the Research Plan as the Research Plan exists as of the Effective Date, infringed or misappropriated the intellectual property rights of such Third Party;

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(e) to Cytokinetics' knowledge, (i) the practice of Cytokinetics Patents listed in **Exhibit C** prior to the Effective Date, and (ii) the practice of any Cytokinetics Know-How that is contemplated to be utilized in the Research Plan as the Research Plan exists as of the Effective Date, did not infringe any valid intellectual property rights owned or possessed by any Third Party and did not breach any obligation of confidentiality or non-use owed by Cytokinetics to a Third Party;

(f) there are no judgments or settlements against or owed by Cytokinetics, and to Cytokinetics' knowledge, there are no pending or threatened claims or litigation, in each case relating to Cytokinetics Patents listed in **Exhibit C**;

(g) up to and including the Effective Date, Cytokinetics has made available to Astellas the Lead Compound IND and [*]; and

(h) Cytokinetics has sufficient legal and/or beneficial title and ownership in the Lead Compound IND to perform its rights and obligations under this Agreement; no Regulatory Authority has, to Cytokinetics' knowledge, commenced or threatened to initiate any action or proceeding to refuse to file, reject, not approve, or withdraw the Lead Compound IND, nor has Cytokinetics received any notice to such effect; and to Cytokinetics' knowledge, Cytokinetics is not in violation of any applicable Laws that could reasonably be expected to form the basis for such an action.

15.3 Representations and Warranties by Astellas. Astellas represents and warrants to Cytokinetics as of the Effective Date that:

(a) it has not previously assigned, transferred, conveyed or otherwise encumbered its right, title and interest in Astellas Patent listed in **Exhibit A** in a manner that is inconsistent with the license granted to Cytokinetics under Section 3.4;

(b) to Astellas' knowledge, all Astellas Patents are listed in **Exhibit A**;

(c) it has the right to grant the license and rights herein to Cytokinetics and it has not granted any license, right or interest in, to or under the Astellas Patents listed in **Exhibit A** to any Third Party that is inconsistent with the license granted to Cytokinetics under Section 3.4;

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(d) it has not received any written notice from any Third Party asserting or alleging that: (i) the development of Astellas Patents listed in **Exhibit A** prior to the Effective Date, or (ii) the practice of any Astellas Know-How that is contemplated to be utilized in the Research Plan as the Research Plan exists as of the Effective Date, infringing or misappropriated the intellectual property rights of such Third Party;

(e) to Astellas' knowledge, there are no [*];

(f) to Astellas' knowledge, (i) the practice of Astellas Patents listed in **Exhibit A** prior to the Effective Date, and (ii) the practice of any Astellas Know-How that is contemplated to be utilized in the Research Plan as the Research Plan exists as of the Effective Date, did not infringe any valid intellectual property rights owned or possessed by any Third Party and did not breach any obligation of confidentiality or non-use owed by Astellas to a Third Party; and

(g) there are no judgments or settlements against or owed by Astellas, and to Astellas' knowledge, there are no pending or threatened claims or litigation, in each case relating to Astellas Patents listed in **Exhibit A**.

15.4 Mutual Covenants.

(a) **No Debarment.** In the course of the Research, Development, Manufacture and Commercialization of the Compounds and Collaboration Products, neither Party nor its Affiliates shall use any employee or consultant (including of any sublicensee), who has been debarred or disqualified by any Regulatory Authority, or, to such Party's or its Affiliates' knowledge, is the subject of debarment or disqualification proceedings by a Regulatory Authority. Each Party shall notify the other Party promptly upon becoming aware that any of its or its Affiliates' employees or consultants has been debarred or is the subject of debarment or disqualification proceedings by any Regulatory Authority.

(b) **Compliance.** Each Party and its Affiliates shall comply in all material respects with all applicable Laws (including all anti-bribery laws) in the Research, Development, Manufacture, Commercialization and Medical Affairs Activities of the Compounds and Collaboration Products and performance of its obligations under this Agreement.

15.5 No Other Warranties. EXCEPT AS EXPRESSLY STATED IN THIS ARTICLE 15, (A) NO REPRESENTATION, CONDITION OR WARRANTY WHATSOEVER IS MADE OR GIVEN BY OR ON BEHALF OF ASTELLAS OR CYTOKINETICS; AND (B) ALL OTHER CONDITIONS AND WARRANTIES WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING ANY CONDITIONS AND WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

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ARTICLE 16
INDEMNIFICATION; LIABILITY; INSURANCE

16.1 Indemnification by Cytokinetics. Cytokinetics shall indemnify and hold Astellas, its Affiliates and sublicensees and their respective officers, directors, agents and employees (“**Astellas Indemnitees**”) harmless from and against any Claims against them to the extent arising or resulting from:

(a) the Research, Development, Manufacture, Co-Promotion, or Commercialization or Medical Affairs Activities of the Compounds and/or Collaboration Products by Cytokinetics or any of its Affiliates, licensees, sublicensees, distributors or contractors; or

(b) the negligence, recklessness or willful misconduct of any of the Cytokinetics Indemnitees; or

(c) the breach of any of the warranties or representations made by Cytokinetics to Astellas under this Agreement; or

(d) the breach by Cytokinetics of its obligations pursuant to this Agreement;

except in each case, to the extent such Claims result from the breach by any Astellas Indemnitee of any covenant, representation, warranty or other agreement made by Astellas in this Agreement or the negligence, recklessness or willful misconduct of any Astellas Indemnitee.

16.2 Indemnification by Astellas. Astellas shall indemnify and hold Cytokinetics, its Affiliates, and their respective officers, directors, agents and employees (“**Cytokinetics Indemnitees**”) harmless from and against any Claims arising under or related to this Agreement against them to the extent arising or resulting from:

(a) the Research, Development, Manufacture, Commercialization or Medical Affairs Activities of the Compounds and/or Collaboration Products by Astellas or any of its Affiliates, licensees, sublicensees, distributors or contractors; or

(b) the negligence, recklessness or willful misconduct of any of the Astellas Indemnitees; or

(c) the breach of any of the warranties or representations made by Astellas to Cytokinetics under this Agreement; or

(d) any breach by Astellas of its obligations pursuant to this Agreement;

except in each case, to the extent such Claims result from the breach by any Cytokinetics Indemnitee of any covenant, representation, warranty or other agreement made by Cytokinetics in this Agreement or the negligence, recklessness or willful misconduct of any Cytokinetics Indemnitee.

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16.3 Indemnification Procedure. If either Party is seeking indemnification under Sections 16.1 or 16.2 (the “**Indemnified Party**”), it shall inform the other Party (the “**Indemnifying Party**”) of the Claim giving rise to the obligation to indemnify pursuant to such Section as soon as reasonably practicable after receiving notice of the Claim. The Indemnifying Party shall have the right to assume the defense of any such Claim for which it is obligated to indemnify the Indemnified Party. The Indemnified Party shall cooperate with the Indemnifying Party and the Indemnifying Party’s insurer as the Indemnifying Party may reasonably request, and at the Indemnifying Party’s cost and expense. The Indemnified Party shall have the right to participate, at its own expense and with counsel of its choice, in the defense of any Claim that has been assumed by the Indemnifying Party. Neither Party shall have the obligation to indemnify the other Party in connection with any settlement made without the Indemnifying Party’s written consent, which consent shall not be unreasonably withheld or delayed. If the Parties cannot agree as to the application of Section 16.1 or 16.2 as to any Claim, pending resolution of the dispute pursuant to Section 17.6(a), the Parties may conduct separate defenses of such Claims, with each Party retaining the right to claim indemnification from the other Party in accordance with Section 16.1 or 16.2 upon resolution of the underlying Claim.

16.4 Mitigation of Loss. Each Indemnified Party shall take and shall procure that its Affiliates take all such reasonable steps and action as are reasonably necessary or as the Indemnifying Party may reasonably require in order to mitigate any Claims (or potential losses or damages) under this Article 16. Nothing in this Agreement shall or shall be deemed to relieve any Party of any common law or other duty to mitigate any losses incurred by it.

16.5 Limitation of Liability. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR INDIRECT DAMAGES ARISING FROM OR RELATING TO ANY BREACH OF THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, NOTHING IN THIS SECTION 16.5 IS INTENDED TO OR SHALL LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF ANY PARTY UNDER SECTION 16.1 OR 16.2, OR DAMAGES AVAILABLE FOR A PARTY’S BREACH OF ITS OBLIGATIONS RELATING TO CONFIDENTIALITY OR INTELLECTUAL PROPERTY HEREUNDER.

16.6 Insurance. Each Party shall procure and maintain insurance, including product liability insurance, with respect to its activities hereunder and which is consistent with normal business practices of prudent companies similarly situated at all times during which any Collaboration Product is being clinically tested in human subjects or commercially distributed or sold. Each Party shall provide the other Party with evidence of such insurance upon request and shall provide the other Party with written notice at least [*] days prior to the cancellation, non-renewal or material changes in such insurance. Such insurance shall not be construed to create a limit of either Party’s liability with respect to its indemnification obligations under this Article 16.

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ARTICLE 17
GENERAL PROVISIONS

17.1 Force Majeure. Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement to the extent such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, potentially including embargoes, war, acts of war (whether war be declared or not), acts of terrorism, insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, earthquakes or other acts of God, or acts, generally applicable action or inaction by any governmental authority (but excluding any government action or inaction that is specific to such Party, its Affiliates or sublicensees, such as revocation or non-renewal of such Party's license to conduct business), or omissions or delays in acting by the other Party, or unavailability of materials related to the Manufacture of Compounds or Collaboration Products. The affected Party shall notify the other Party in writing of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake and continue diligently all reasonable efforts necessary to cure such force majeure circumstances or to perform its obligations in spite of the ongoing circumstances.

17.2 Assignment. This Agreement may not be assigned or otherwise transferred, nor may any right or obligation hereunder be assigned or transferred, by either Party without the prior written consent of the other Party. Notwithstanding the foregoing, either Party may, without consent of the other Party, assign this Agreement and its rights and obligations hereunder in whole or in part to an Affiliate of such Party, or in whole to its successor-in-interest in connection with the sale of all or substantially all of its stock or its assets to which this Agreement relates, or in connection with a merger, acquisition or similar transaction. Any attempted assignment not in accordance with this Section 17.2 shall be null and void and of no legal effect. Any permitted assignee shall assume all assigned obligations of its assignor under this Agreement. The terms and conditions of this Agreement shall be binding upon, and shall inure to the benefit of, the Parties and their respected successors and permitted assigns.

17.3 Severability. If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall in such an instance use their best efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) which, insofar as practical, implement the purposes of this Agreement.

17.4 Notices. All notices which are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal

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delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

If to Cytokinetics:

Cytokinetics, Inc.
280 East Grand Avenue
South San Francisco, CA 94080
USA
Attn: President
Fax: 650-624-3010
Copy to: General Counsel

with a copy to:

Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304, USA
Attn: Robert L. Jones, Esq.
Fax: (650) 849-7400

If to Astellas:

Astellas Pharma Inc.
2-5-1, Nihonbashi-Honcho
Chuo-ku, Tokyo 103-8411
Japan
Attn: Vice President, Legal & Compliance
Fax: [*]

or to such other address(es) as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a Business Day (or if delivered or sent on a non-Business Day, then on the next Business Day); (b) on the fifth (5th) Business Day after dispatch if sent by nationally-recognized overnight courier; or (c) on the tenth (10th) Business Day following the date of mailing, if sent by mail.

17.5 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of [*] and the patent laws of the United States without reference to any rules of conflict of laws.

17.6 Dispute Resolution.

(a) The Parties shall negotiate in good faith and use reasonable efforts to settle any dispute, controversy or claim arising from or related to this Agreement or the breach thereof. If the Parties do not fully settle, and a Party wishes to pursue the matter, each such dispute, controversy or claim that is not a matter addressed in Section [*] shall be finally shall be

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settled by binding arbitration administered by [*] pursuant to its [*] then in effect (the “[*] Rules”), except as otherwise provided herein. The arbitration shall be governed by the United States Federal Arbitration Act, 9 U.S.C. §§ 1-16 (the “**Federal Arbitration Act**”), to the exclusion of any inconsistent state laws. The U.S. Federal Rules of Civil Procedure shall govern discovery and the U.S. Federal Rules of Evidence shall govern evidence for the arbitration. The arbitration will be conducted in San Francisco, California and the Parties consent to the personal jurisdiction of the United States federal courts, for any case arising out of or otherwise related to this arbitration, its conduct and its enforcement. Any situation not expressly covered by this Agreement shall be decided in accordance with the [*] Rules. The arbitrator shall be one (1) neutral, independent and impartial arbitrator selected from a pool of retired federal judges to be presented to the Parties by [*]. Failing the agreement of the Parties as to the selection of the arbitrator within [*] days, the arbitrator shall be appointed by [*] in accordance with the [*] Rules. Notwithstanding any other provision of this Section 17.6(a), either Party shall have the right to seek and be granted exigent, injunctive or temporary relief in any court of competent jurisdiction.

(b) Any unresolved dispute between the Parties under Section [*] as follows. The Parties shall agree on [*] both Parties and all of [*] relating to [*], each Party shall [*] and the other Party [*] with any relevant [*], each Party may [*] the other Party’s [*] may also [*]. The Parties [*] days after the Parties have [*], at which time each Party shall [*] to the Parties [*], provided that the [*]. Neither Party shall have any [*] without the participation of the other Party. Within [*] days after [*] on such [*] the Parties. The [*] by the Party [*].

17.7 Foreign Corrupt Practices Act Compliance.

(a) **Compliance with FCPA.** The U.S. government imposes and enforces prohibitions on the payment or transfer of anything of value to governments, government officials, political parties or political party officials (or relatives or associates of such officials) (“**FCPA Covered Person**”) for the purpose of illegally influencing them, whether directly or indirectly, to obtain or retain business. This U.S. law is referred to as the Foreign Corrupt Practices Act (“**FCPA**”), and it can have application to conduct of a U.S. corporation’s foreign subsidiaries, employees, agents and distributors. A summary of the law and related information can be found at <http://www.justice.gov/criminal/fraud/fcpa>. By signing this Agreement, each Party warrants that:

(i) It is familiar with the provisions and restrictions contained in the OECD Convention and FCPA.

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(ii) It shall comply with the FCPA in marketing, selling and/or servicing the Collaboration Products under this Agreement.

(iii) It shall not, in the course of its duties under the Agreement, offer, promise, give, demand, seek or accept, directly or indirectly, any gift or payment, consideration or benefit in kind to any FCPA Covered Person that would or could be construed as an illegal or corrupt practice.

(iv) It is not an FCPA Covered Person or affiliated with any FCPA Covered Person.

(v) It shall immediately notify the other Party of any attempt by any FCPA Covered Person to directly or indirectly solicit, ask for, or attempt to extort anything of value from the first Party, and shall refuse any such solicitation, request or extortionate demand except a facilitating payment as expressly permitted under the FCPA.

(b) Compliance Certificate. From time to time upon request from one Party, the other Party shall submit a compliance certificate in the form set forth in **Exhibit K** stating that (i) it fully understands its obligations under this Section 17.7 and any other applicable laws and regulations mentioned herein or as may come into existence from time to time after the Effective Date; (ii) it has been complying with this Section 17.7 and any other applicable laws and regulations mentioned herein or as may come into existence from time to time after the Effective Date; and (iii) it will continue to comply with this Section 17.7 and any other applicable laws and regulations mentioned herein or as may come into existence from time to time after the Effective Date.

(c) No Action. In no event shall one Party be obligated under the Agreement to take any action or omit to take any action that such Party believes, in good faith, would cause it to be in violation of any applicable laws and regulations, including the anti-bribery laws referenced in this Section 17.7.

(d) Due Diligence. Each Party shall have the right to visit the offices of the other Party from time to time during the term of the Agreement on an “as needed” basis and conduct due diligence in relation to the other Party’s business related to performance of its obligations under this Section 17.7 and may do so in the way it deems necessary, appropriate or desirable so as to ensure that the other Party complies with this Section 17.7 and any other applicable laws and regulations in its business operations. Each Party shall make every effort to cooperate fully with the other Party in any such due diligence.

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(e) Audit. In the event that one Party has reason to believe that a breach of any obligation of the other Party under this Section 17.7 has occurred or may occur, the first Party shall have the right to select an independent third party to conduct an audit of the other Party and review relevant books and records of the other Party, to satisfy itself that no breach has occurred. Unless otherwise required under applicable laws and regulations or by order of a competent court or regulatory authority, the first Party shall ensure that the selected independent third party will keep confidential all audited matters and the results of the audit. The first Party does reserve the right to disclose to the U.S. or foreign government, its agencies and/or any other government or non-government party, information relating to a possible violation by the other Party of any applicable law, including a violation of the FCPA or any other applicable anti-bribery law.

17.8 Entire Agreement; Amendments. This Agreement, together with the Exhibits hereto, contains the entire understanding of the Parties with respect to the collaboration and the licenses granted hereunder. Any other express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, in respect to the collaboration and the licenses granted hereunder are superseded by the terms of this Agreement. The Exhibits to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by authorized representative(s) of both Parties hereto. The Parties agree that, effective as of the Effective Date, that certain Non-Disclosure Agreement between the Parties dated as of September 4, 2012, as amended ("**Confidentiality Agreement**") shall be superseded by this Agreement, and that disclosures made prior to the Effective Date pursuant to the Confidentiality Agreement shall be subject to the confidentiality and non-use provisions of this Agreement.

17.9 Headings. The captions to the several Articles, Sections and subsections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.

17.10 Independent Contractors. Cytokinetics and Astellas are independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither Cytokinetics nor Astellas shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

17.11 Waiver. The waiver by either Party hereto of any right hereunder, or of any failure of the other Party to perform, or of any breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach by or failure of such other Party whether of a similar nature or otherwise.

17.12 Cumulative Remedies. No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

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17.13 Waiver of Rule of Construction. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, no ambiguity in this Agreement shall be strictly construed against either Party.

17.14 Business Day Requirements. In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a Business Day then such notice or other action or omission shall be deemed to be required to be taken on the next occurring Business Day.

17.15 Translations. This Agreement is in the English language only, which language shall be controlling in all respects, and all versions hereof in any other language shall be for accommodation only and shall not be binding upon the Parties. All communications and notices to be made or given pursuant to this Agreement, and any dispute proceeding related to or arising hereunder, shall be in the English language. If there is a discrepancy between any translation of this Agreement and this Agreement, this Agreement shall prevail.

17.16 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as necessary or appropriate in order to carry out the purposes and intent of this Agreement.

17.17 Counterparts. This Agreement may be executed in two or more counterparts by original signature, facsimile or PDF files, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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IN WITNESS WHEREOF, the Parties intending to be bound have caused this Agreement to be executed by their duly authorized representatives as of the Amendment Effective Date.

Cytokinetics, Inc.

Astellas Pharma Inc.

By: /s/ Robert I. Blum
Name: Robert I. Blum
Title: President and CEO

By: /s/ Yoshihiko Hatanaka
Name: Yoshihiko Hatanaka
Title: President and CEO

<SIGNATURE PAGE OF THE AMENDED AND RESTATED LICENSE AND COLLABORATION AGREEMENT
BY AND BETWEEN
CYTOKINETICS, INC. AND ASTELLAS PHARMA INC.>

[*] = 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 406 of the Securities Act of 1933, as amended.

LIST OF EXHIBITS

Exhibit A:	Existing Astellas Patents
Exhibit B:	Compound Criteria
Exhibit C:	Existing Cytokinetics Patents
Exhibit D:	Retained Indications
Exhibit E:	[*] Patent Rights
Exhibit F:	Alliance Managers and Committee Members
Exhibit G:	[Omitted]
Exhibit H:	[Omitted]
Exhibit I:	Term sheet for Co-Promotion Agreement
Exhibit J:	Press Release for the Amended and Restated Agreement
Exhibit K:	Form of Certificate of Compliance
Exhibit L:	[*] Indications
Exhibit M:	Certain Development Activities for SMA

[*] = 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 406 of the Securities Act of 1933, as amended.

Exhibit A
Existing Astellas Patents

[*]

[*] = 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 406 of the Securities Act of 1933, as amended.

Exhibit B
Compound Criteria ¹

[*]

¹ [*]

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[*]

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Exhibit C
Existing Cytokinetics Patents

[*]

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Exhibit D
Retained Indications

[*]

[*] = 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 406 of the Securities Act of 1933, as amended.

Exhibit E
[*] Patent Rights

[*]

[*] = 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 406 of the Securities Act of 1933, as amended.

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Exhibit F
Alliance Managers and Committee Members

	<u>Astellas</u>	<u>Cytokinetics</u>
Joint Steering Committee	[*]	[*]
Joint Research Committee	[*]	[*]
Joint Development Committee	[*]	[*]

[*] = 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 406 of the Securities Act of 1933, as amended.

Joint Manufacturing Committee
Joint Patent Committee
Alliance Managers

[*] [*]
[*] [*]
[*] [*]
[*] [*]

[*] = 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 406 of the Securities Act of 1933, as amended.

Exhibit I
Term sheet for Co-Promotion Agreement for Collaboration Products

This Exhibit I sets forth material terms and conditions that, together with the terms of Section 9.6 of the Agreement, shall be incorporated into a Co-Promotion Agreement to be negotiated and entered into by the Parties for the Collaboration Product for which Cytokinetics exercises its option to Co-Promote in accordance with Section 9.6 of the Agreement (such Collaboration Product, the “**Co-Promotion Product**”).

[*]

[*] = **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 406 of the Securities Act of 1933, as amended.**

[*]

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Exhibit J
Press Release

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**CYTOKINETICS AND ASTELLAS ANNOUNCE EXPANSION OF COLLABORATION
FOR DEVELOPMENT OF CK-2127107 IN SPINAL MUSCULAR ATROPHY
AND OTHER NEUROMUSCULAR INDICATIONS**

Cytokinetics Expects to Receive Over \$75 Million in Committed Capital and Reimbursements For Planned Activities

Companies Plan to Initiate Phase II Clinical Trial in 2015

South San Francisco, CA, and Tokyo, December 23, 2014 – Cytokinetics, Incorporated (NASDAQ:CYTK) and Astellas Pharma Inc. (Tokyo Stock Exchange: 4503, “Astellas”) announced today an amendment to their collaboration agreement focused on the research, development and commercialization of skeletal muscle activators. The companies have been jointly conducting research and development activities with the objective to advance novel skeletal sarcomere targeted therapies for diseases and medical conditions associated with muscle weakness in non-neuromuscular indications. The collaboration has been expanded to enable development of CK-2127107, a fast skeletal troponin activator, in Spinal Muscular Atrophy (SMA) and potentially other neuromuscular indications. As the companies have agreed, Cytokinetics will conduct a Phase II clinical trial of CK-2127107 in patients with SMA, which is planned to begin in 2015. Cytokinetics and Astellas will jointly develop and may jointly commercialize CK-2127107 and other fast skeletal troponin activators in neuromuscular indications. The companies have extended their joint research program focused on the discovery of additional skeletal sarcomere activators through 2016.

Upon execution of the amended agreement, Cytokinetics will receive \$55 million from Astellas comprising \$30 million as an upfront license fee, \$10 million paid for Astellas’ purchase of Cytokinetics’ common stock and \$15 million in a milestone payment in connection with the decision made by Astellas to advance CK-2127107 into Phase II clinical development. In addition, Cytokinetics expects to receive potentially over \$20 million payable by Astellas to reimburse Cytokinetics for planned research and development expenses over the next 2 years. Under the amended agreement, Cytokinetics is eligible to receive over \$600 million in pre-commercialization and commercialization milestone payments, of which over \$100 million is payable for CK-2127107 in each of SMA and other neuromuscular indications. The agreed terms also provide for escalating royalties to Cytokinetics with increased sales. Cytokinetics retains the option to co-fund the development of CK-2127107 in SMA and other neuromuscular indications in exchange for increased milestone payments and royalties and, if Cytokinetics exercises its co-promotion option, Astellas will reimburse Cytokinetics for certain expenses associated with its promotion activities.

“We are pleased to expand our collaboration with Astellas to enable the joint pursuit of CK-2127107 in SMA and other potential neuromuscular indications as well as the indications which were the initial focus of our collaboration,” stated Robert I. Blum, Cytokinetics’ President and Chief Executive Officer. “We are impressed with Astellas’ strategic vision for skeletal muscle activators and look forward to increasing the scope of our activities to prioritize the treatment of neuromuscular diseases that may benefit from our novel mechanism approach to increased muscle function and time to muscle fatigue.”

“We are excited to expand our collaboration with Cytokinetics and to advance this drug candidate into Phase II,” stated Yoshihiko Hatanaka, Astellas’ President and Chief Executive Officer. “We are encouraged by the result of the completed Phase I studies for CK-2127107 and are hopeful for the future of this new frontier of muscle biology. The expansion of our alliance is a testament to our productive collaboration together and illustrates the broad potential that we envision for this program.”

Expanded Scope of Collaboration

Cytokinetics and Astellas entered into collaboration in 2013. Cytokinetics exclusively licensed to Astellas the rights to co-develop and commercialize CK-2127107, a fast skeletal troponin activator drug candidate, for potential application in non-neuromuscular indications under the collaboration agreement. In accordance with the initial scope of the collaboration, Cytokinetics completed Phase I clinical development activities and other Phase II readiness activities. In connection with the

expanded collaboration, the companies have agreed to advance CK-2127107 into Phase II clinical development initially in SMA. The development program may include other neuromuscular indications as the companies may agree in the future. In connection with the expanded collaboration, Cytokinetics and Astellas have also agreed to extend their joint research program through 2016. Under the amended collaboration, Astellas has exclusive rights to co-develop and commercialize CK-2127107 and other fast skeletal troponin activators in non-neuromuscular indications and certain neuromuscular indications (including SMA) 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 North America and Europe under agreed scenarios. Outside the collaboration, Cytokinetics may continue to independently develop *tirasemtiv*, a fast skeletal troponin activator that recently completed a Phase II clinical trials program for the potential treatment of amyotrophic lateral sclerosis (ALS), in ALS and other neuromuscular indications subject to certain agreed limitations.

Cytokinetics Conference Call / Webcast

Cytokinetics will host a conference call on January 5, 2015 at 8:30 a.m. Eastern Time. The conference call will be simultaneously webcast and will be accessible in the Investor Relations section of Cytokinetics' Web site; for further information please go to www.cytokinetics.com. The live audio of the conference call is also accessible via telephone to investors, members of the news media and the general public by dialing either (866) 999-2985 (CYTK) (United States and Canada) or (706) 679-3078 (International) and typing in the passcode 52398702. An archived replay of the webcast will be available via Cytokinetics' website until February 5, 2015. The replay will also be available via telephone from January 5, 2015 at 11:30 a.m. Eastern Time until February 5, 2015 by dialing (855) 859-2056 (United States and Canada) or (404) 537-3406 (International) and typing in the passcode 52398702.

About CK-2127107

Skeletal muscle contractility is driven by the sarcomere, the fundamental unit of skeletal muscle contraction. It is a highly ordered cytoskeletal structure composed of several key proteins. Skeletal muscle myosin is the cytoskeletal motor protein that converts chemical energy into mechanical force through its interaction with actin. A set of regulatory proteins, which includes tropomyosin and several types of troponin, make the actin-myosin interaction dependent on changes in intracellular calcium levels. CK-2127107, a novel skeletal muscle activator arising from Cytokinetics' skeletal muscle contractility program, slows the rate of calcium release from the regulatory troponin complex of fast skeletal muscle fibers, which sensitizes the sarcomere to calcium, leading to an increase in skeletal muscle contractility. CK-2127107 has demonstrated pharmacological activity that may lead to new therapeutic options for diseases associated with muscle weakness and fatigue. In non-clinical models of Spinal Muscular Atrophy, a skeletal muscle activator has demonstrated increases in skeletal submaximal muscle force in response to neuronal input and delays in the onset and reductions in the degree of muscle fatigue. CK-2127107 has been the subject of five completed Phase I clinical trials in healthy volunteers, which evaluated safety, tolerability, bioavailability, pharmacokinetics and pharmacodynamics.

About Spinal Muscular Atrophy

Spinal Muscular Atrophy (SMA) is a severe neuromuscular disease that occurs in 1 in every 6,000 to 10,000 live births each year and is one of the most common fatal genetic disorders. Spinal muscular atrophy manifests in various degrees of severity as progressive muscle weakness resulting in respiratory and mobility impairment. There are four types of SMA, named for time of the initial onset of muscle weakness and related symptoms: Type I (Infantile), 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 no more than 2 years from birth, to the Type IV, who have a normal life span but with gradual weakness in the proximal muscles of the extremities resulting in mobility issues. Few treatment options exist for these patients, resulting in a high unmet need for new therapeutic options to address symptoms and modify disease progression.

About Cytokinetics

Cytokinetics is a clinical-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 other medical conditions. Cytokinetics currently has three compounds in clinical development: *omecamtiv mecarbil* in Phase II for acute and chronic heart failure, *tirasemtiv* in Phase II for ALS and CK-2127107 progressing to Phase II in SMA. All of the company's drug candidates have arisen from Cytokinetics' muscle biology focused research activities and are directed towards the cytoskeleton. The cytoskeleton is a complex biological infrastructure that plays a fundamental role within every human cell. Additional information about Cytokinetics can be obtained at <http://www.cytokinetics.com>.

About Astellas

Astellas Pharma Inc., located in Tokyo, Japan, is a pharmaceutical company dedicated to improving the health of people around the world through the provision of innovative and reliable pharmaceuticals. Astellas has approximately 18,000 employees worldwide. The organization is committed to becoming a global category leader in Urology, Immunology (including Transplantation) and Infectious diseases, Oncology, Neuroscience and DM Complications and Kidney diseases. For more information on Astellas Pharma Inc., please visit the company website at www.astellas.com/en.

Forward-Looking Statements: Cytokinetics

This press release contains forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995 (the "Act"). Cytokinetics disclaims any intent or obligation to update these forward-looking statements, and claims the protection of the Act's Safe Harbor for forward-looking statements. Examples of such statements include, but are not limited to, statements relating to Cytokinetics' and Astellas' planned research and development activities, including the expected timing, scope and conduct of a Phase II clinical trial of CK-2127107 in SMA; the significance and utility of preclinical and non-clinical study and clinical trial results; potential milestone payments, royalties and other payments; the expected roles of Cytokinetics and Astellas under the collaboration and in developing or commercializing drug candidates or products subject to the collaboration; the indications to be pursued under the collaboration; the potential size of markets for CK-2127107; Cytokinetics' continued development of tirasemtiv; and the properties and potential benefits of Cytokinetics' skeletal muscle activators, including CK-2127107. Such statements are based on management's current expectations, but actual results may differ materially due to various risks and uncertainties, including, but not limited to, further clinical development of tirasemtiv in ALS patients will require significant additional funding, and Cytokinetics may be unable to obtain such additional funding on acceptable terms, if at all; potential difficulties or delays in the development, testing, regulatory approvals for trial commencement, progression or product sale or manufacturing, or production of Cytokinetics' drug candidates that could slow or prevent clinical development or product approval, including risks that current and past results of clinical trials or preclinical studies may not be indicative of future clinical trials results, patient enrollment for or conduct of clinical trials may be difficult or delayed, Cytokinetics' drug candidates may have adverse side effects or inadequate therapeutic efficacy, the U.S. Food and Drug Administration or foreign regulatory agencies may delay or limit Cytokinetics' or its partners' ability to conduct clinical trials, and Cytokinetics may be unable to obtain or maintain patent or trade secret protection for its intellectual property; Amgen's and Astellas' decisions with respect to the design, initiation, conduct, timing and continuation of development activities for omeceamtiv mecarbil and CK-2127107, respectively; Cytokinetics may incur unanticipated research and development and other costs or be unable to obtain additional financing necessary to conduct development of its products; Cytokinetics may be unable to enter into future collaboration agreements for its drug candidates and programs on acceptable terms, if at all; standards of care may change, rendering Cytokinetics' drug candidates obsolete; competitive products or alternative therapies may be developed by others for the treatment of indications Cytokinetics' drug candidates and potential drug candidates may target; and risks and uncertainties relating to the timing and receipt of payments from its partners, including milestones and royalties on future potential product sales under Cytokinetics' collaboration agreements with such partners. For further information regarding these and other risks related to Cytokinetics' business, investors should consult Cytokinetics' filings with the Securities and Exchange Commission.

Forward-Looking Statements: Astellas

This press release includes forward-looking statements based on assumptions and beliefs in light of the information currently available to management and subject to significant risks and uncertainties. Forward-looking statements include all statements other than statements of historical fact, including plans, strategies and expectations for the future, statements regarding the expected timing of filings and approvals relating to the transaction, the expected timing of the completion of the transaction, the ability to complete the transaction or to satisfy the various closing conditions, future revenues and profitability from or growth or any assumptions underlying any of the foregoing. Statements made in the future tense, and words such as "anticipate," "expect," "project," "continue," "believe," "plan," "estimate," "pro forma," "intend," "potential," "target," "forecast," "guidance," "outlook," "seek," "assume," "will," "may," "should," and similar expressions are intended to qualify as forward-looking statements. Forward-looking statements are based on estimates and assumptions made by management that are believed to be reasonable, though they are inherently uncertain and difficult to predict. Investors and security holders are cautioned not to place undue reliance on these forward-looking statements.

Actual financial results may differ materially depending on a number of factors including adverse economic conditions, currency exchange rate fluctuations, adverse legislative and regulatory developments, delays in new product launch, pricing and product initiatives of competitors, the inability of the company to market existing and new products effectively,

interruptions in production, infringements of the company's intellectual property rights and the adverse outcome of material litigation. This press release contains information on pharmaceuticals (including compounds under development), but this information is not intended to make any representations or advertisements regarding the efficacy or effectiveness of these pharmaceuticals nor provide medical advice of any kind.

Contact:

Cytokinetics, Inc.
Joanna L. Goldstein
Investors & Media
Tel: (650) 624-3000
Fax: (650) 624-3010

Astellas Pharma Inc.
Corporate Communications
Tel: +81-3-3244-3201
Fax: +81-3-5201-7473

Exhibit K
Form of Certificate of Compliance

I, [] of Astellas Pharma Inc., which is conducting business with Cytokinetics, Inc. per our License and Collaboration Agreement dated [].

I hereby acknowledge and certify that I am familiar and knowledgeable about the requirements of the FCPA and other applicable Anti-Corruption Laws and their requirements.

I certify that Astellas has not, and will not, take any action in furtherance of an unlawful offer, promise, or payment to a foreign official that would cause Cytokinetics, Inc. to be in violation of the FCPA, any other applicable Anti-Corruption Law. I further certify that Astellas has made no agreement or commitment, directly or indirectly, which, if carried out in the future, would cause Cytokinetics, Inc. to be in violation of the FCPA or any other applicable Anti-Corruption Law.

“FCPA” shall mean the U.S. Foreign Corrupt Practices Act (15 U.S.C. Section 78dd-1, et seq.) as amended.

“Anti-Corruption Laws” shall mean all applicable laws, regulations, orders, judicial decisions, conventions and international financial institution rules regarding corruption, bribery, ethical business conduct, money laundering, political contributions, gifts and gratuities, or lawful expenses to public officials and private persons, agency relationships, commissions, lobbying, books and records, and financial controls.

Signature: _____
Printed Name: _____
Title: _____
Company: Astellas Pharma Inc.
Dated: _____

[*] = **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 406 of the Securities Act of 1933, as amended.**

Form of Certificate of Compliance

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I hereby acknowledge and certify that I am familiar and knowledgeable about the requirements of the FCPA and other applicable Anti-Corruption Laws and their requirements.

I certify that Cytokinetics has not, and will not, take any action in furtherance of an unlawful offer, promise, or payment to a foreign official that would cause Astellas Pharma Inc. to be in violation of the FCPA, any other applicable Anti-Corruption Law. I further certify that Cytokinetics has made no agreement or commitment, directly or indirectly, which, if carried out in the future, would cause Astellas Pharma Inc. to be in violation of the FCPA or any other applicable Anti-Corruption Law.

“**FCPA**” shall mean the U.S. Foreign Corrupt Practices Act (15 U.S.C. Section 78dd-1, et seq.) as amended.

“**Anti-Corruption Laws**” shall mean all applicable laws, regulations, orders, judicial decisions, conventions and international financial institution rules regarding corruption, bribery, ethical business conduct, money laundering, political contributions, gifts and gratuities, or lawful expenses to public officials and private persons, agency relationships, commissions, lobbying, books and records, and financial controls.

Signature: _____
Printed Name: _____
Title: _____
Company: Cytokinetics, Inc.
Dated: _____

[*] = **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 406 of the Securities Act of 1933, as amended.**

Exhibit L
[*] Indications

1. [*]
- [*] = **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 406 of the Securities Act of 1933, as amended.**

Exhibit M
Certain Development Activities for SMA

[*]

[*] = **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 406 of the Securities Act of 1933, as amended.**

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (Nos. 333-174869, 333-178189, 333-182226, and 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 and 333-190458) of Cytokinetics, Incorporated of our report dated March 6, 2015 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 6, 2015

**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 the 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 6, 2015

**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 the Exchange Act Rules 13a-(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 6, 2015

**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 Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, Robert I. Blum, President, Chief Executive Officer and Director, and Sharon A. Barbari, Chief Financial Officer, of Cytokinetics, Incorporated (the "Company"), hereby certify that to the best of our knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, 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 6, 2015

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.

