CYTOKINETICS INC
Form 10-Q
August 04, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number: 000-50633

CYTOKINETICS, INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	94-3291317
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

280 East Grand Avenue

South San Francisco, California 94080
(Address of principal executive offices) (Zip Code)
Registrant's telephone number, including area code: (650) 624-3000

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 web site, 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 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. (Check one):

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

Number of shares of common stock, $0.001 par value, outstanding as of July 27, 2017: 53,666,761

CYTOKINETICS, INCORPORATED

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS
CYTOKINETICS, INCORPORATED

CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share data) (Unaudited)

	June 30, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$100,711	$66,874
Short-term investments	211,340	89,375
Accounts receivable	-	24
Prepaid and other current assets	4,945	2,360
Total current assets	316,996	158,633
Long-term investments	20,087	7,672
Property and equipment, net	3,268	3,637
Other assets	279	200
Total assets	$340,630	$170,142
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$1,783	$4,236
Accrued liabilities	13,545	18,047
Deferred revenue, current	7,942	8,060
Current portion of long-term debt	7,315	2,500
Other current liabilities	474	415
Total current liabilities	31,059	33,258
Long-term debt, net	22,844	27,381
Liability related to the sale of future royalties, net	96,657	—
Deferred revenue, non-current	15,067	15,000
Other long-term liabilities	2	142
Total liabilities	165,629	75,781
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Preferred stock, $0.001 par value:		
Authorized: 10,000,000 shares;		
Issued and outstanding: Series A Convertible Preferred Stock — zero shares at June 30, 2017 and December 31, 2016	—	—
Common stock, $0.001 par value:		
Authorized: 163,000,000 shares;		
Issued and outstanding: 53,457,091 shares at June 30, 2017 and 40,646,595 shares at December 31, 2016	53	41

Additional paid-in capital	748,273	612,474
Accumulated other comprehensive income (loss)	(86)	137
Accumulated deficit	(573,239)	(518,291)
Total stockholders' equity	175,001	94,361
Total liabilities and stockholders' equity	$340,630	$170,142

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

CYTOKINETICS, INCORPORATED

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(In thousands, except per share data) (Unaudited)

	Three Months Ended		Six Months Ended	
	June 30, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Revenues:				
Research and development, grant and other revenues, net	$(1,889)	$ 3,852	$818	$ 8,299
License revenues	4,942	1,950	6,388	5,923
Total revenues	$3,053	$ 5,802	$7,206	$ 14,222
Operating expenses:				
Research and development	$19,809	9,723	$39,098	23,256
General and administrative	8,438	7,090	16,553	13,931
Total operating expenses	28,247	16,813	55,651	37,187
Operating loss	(25,194)	(11,011)	(48,445)	(22,965)
Interest expense	(782)	(707)	(1,540)	(1,271)
Non-cash interest expense on liability related to sale of future royalties	(3,717)	-	(6,012)	-
Interest and other income, net	612	107	1,049	170
Net loss	(29,081)	(11,611)	(54,948)	(24,066)
Net loss per share - basic and diluted	$(0.60)	$ (0.29)	$(1.22)	$ (0.61)
Weighted-average number of shares used in computing net loss per share — basic and diluted	48,218	39,666	44,910	39,629
Other comprehensive (loss) income:				
Unrealized (loss) gain on available-for-sale securities, net	(78)	73	(223)	80
Comprehensive loss	$(29,159)	$ (11,538)	$(55,171)	$ (23,986)

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

CYTOKINETICS, INCORPORATED

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands) (Unaudited)

	Six Months Ended	
	June 30, 2017	June 30, 2016
Cash flows from operating activities:		
Net loss	$(54,948)	$ (24,066)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization of property and equipment	860	340
Gain on disposal of equipment	(82)	(2)
Stock-based compensation	4,141	3,400
Non-cash interest expense related to long-term debt	278	257
Non-cash interest expense on liability related to sale of future royalties	6,036	—
Changes in operating assets and liabilities:		
Accounts receivable	24	(14)
Prepaid and other assets	(2,663)	(4,600)
Accounts payable	(1,888)	841
Accrued and other liabilities	(3,912)	1,143
Deferred revenue	(51)	(6,024)
Net cash used in operating activities	(52,205)	(28,725)
Cash flows from investing activities:		
Purchases of investments	(201,531)	(70,709)
Proceeds from sales and maturities of investments	66,928	47,036
Proceeds from sale of property and equipment	-	32
Purchases of property and equipment	(1,646)	(436)
Net cash used in investing activities	(136,249)	(24,077)
Cash flows from financing activities:		
Proceeds from public offerings of common stock, net of issuance costs	112,232	—
Proceeds from sale of future royalties, net of issuance costs	90,621	—
Proceeds from issuance of common stock related to sale of future royalties, net of issuance costs	7,560	—
Proceeds from long term debt, net of debt discount and issuance costs	-	14,996
Proceeds from stock based award activities and warrants, net	11,878	454
Net cash provided by financing activities	222,291	15,450
Net increase (decrease) in cash and cash equivalents	33,837	(37,352)
Cash and cash equivalents, beginning of period	66,874	65,076
Cash and cash equivalents, end of period	$100,711	$ 27,724

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

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CYTOKINETICS, INCORPORATED

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Organization and Significant Accounting Policies

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

The Company'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 $573.2 million since inception and there can be no assurance that the Company will attain profitability. The Company had a net loss of $54.9 million and net cash used in operations of $52.2 million for the six months ended June 30, 2017. Cash, cash equivalents and investments increased to $332.1 million at June 30, 2017 from $163.9 million at December 31, 2016. The Company anticipates that it will have operating losses and net cash outflows in future periods.

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

Based on the current status of its research and development plans, the Company believes that its existing cash, cash equivalents and investments will be sufficient to fund its cash requirements for at least the next 12 months, from the filing date of this Quarterly Report on Form 10-Q. 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.

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 condensed consolidated financial statements include the accounts of Cytokinetics and its wholly owned subsidiary. The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") for interim financial information and the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. The financial statements include all adjustments (consisting only of normal recurring adjustments) that management believes are necessary for the fair statement of the Company's position at June 30, 2017, and the results of operations for the three and six months ended June 30, 2017 and the cash flows for the six months ended June 30, 2017. These interim financial statement results are not necessarily indicative of results to be expected for the full fiscal year or any future interim period. The balance sheet at December 31, 2016 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by GAAP for complete financial statements. The financial statements and related disclosures have been prepared with the presumption that users of the interim financial statements have read or have access to the audited

financial statements for the preceding fiscal year. Accordingly, these financial statements should be read in conjunction with the audited financial statements and notes thereto contained in the Company's Form 10-K for the year ended December 31, 2016, as filed with the SEC on March 6, 2017.

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.

Stock-Based Compensation

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

The Company reviews the valuation assumptions at each grant date and, as a result, from time to time it will likely change the valuation assumptions it uses to value stock based awards granted in future periods. The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates at the time, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if conditions change and the management uses different assumptions, the Company's stock-based compensation expense could be materially different in the future. In addition, the Company will continue to maintain the current forfeiture policy 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.

Non-Cash Interest Expense on Liabilities Related to Sale of Future Royalties

The Company accounted for Liabilities related to sale of future royalties as a debt financing for accounting purposes, to be amortized under the effective interest rate method over the life of the related royalty stream when the Company has a significant continuing involvement in the generation of royalty streams.

Liabilities related to sale of future royalties and the debt amortization are based on the Company's current estimates of future royalties expected to be paid over the life of the arrangement. The Company will periodically assess the expected royalty payments using a combination of internal projections and forecasts from external sources. To the extent the Company's future estimates of future royalty payments are greater or less than its previous estimates or the estimated timing of such payments is materially different than its previous estimates, the Company will adjust the liabilities related to sale of future royalties and prospectively recognize related non-cash interest expense.

Prior Year's Presentations

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

Recent Accounting Pronouncements

In May 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update ("ASU") 2017-09, Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting to clarify when to account for a change to the terms or conditions of a share-based payment award as a modification. Under this new guidance, modification accounting is required if the fair value, vesting conditions, or classification of the award changes as a result of the change in terms or conditions. ASU 2017-09 is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within each annual reporting period. The Company does not expect the adoption of this guidance to have a material impact on its financial statements or disclosures.

In August 2016, the FASB issued ASU 2016-15, 'Statement of cash flows (Topic 230): Classification of certain cash receipts and cash payments'. ASU 2016-15 issued guidance to clarify how certain cash receipts and payments should be presented in the statement of cash flows. ASU 2016-15 is effective for annual and interim reporting periods beginning after December 15, 2017 and

early adoption is permitted. The Company does not expect the adoption of this standard to have a material effect on its financial statements or disclosures.

In June 2016, the FASB issued ASU 2016-13, ‘Financial Instruments — Credit Losses — Measurement of Credit Losses on Financial Instruments. ASU 2016-13 changes the impairment model for most financial assets and certain other instruments. ASU 2016-13 is effective for annual and interim reporting periods beginning after December 15, 2019. The Company is in the process of evaluating the impact the adoption of this standard would have on its financial statements and disclosures.

In March 2016, the FASB issued ASU No. 2016-09 — Improvements to Employee Share-Based Payment Accounting which simplifies various aspects of accounting for share-based payments and presentation in the financial statements. ASU 2016-09 is effective for annual and interim reporting periods beginning after December 15, 2016 and early adoption is permitted. During the three months ended March 31, 2017, the Company adopted ASU No. 2016-09 on a modified retrospective approach. The guidance requires us to recognize all excess tax benefits and tax deficiencies as income tax expense or benefit in the income statement and recognize previously unrecognized excess tax benefits upon adoption as a cumulative-effect adjustment in retained earnings, which eliminates the need to track unrecognized excess tax benefits for both new and existing awards. As of January 1, 2017, the Company recognized excess tax benefit of $0.7 million as an increase to deferred tax assets related to tax loss carryover. However, the entire amount was offset by a full valuation allowance. Accordingly, no cumulative-effect adjustment to retained earnings was recorded as of June 30, 2017. The Company will maintain its current forfeiture policy to estimate forfeitures expected to occur to determine stock-based compensation expense. The adoption of this aspect of the guidance did not have a material impact on our financial statements and disclosures.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). ASU 2016-02 requires management to record right-to-use asset and lease liability on the statement of financial position for operating leases. ASU 2016-02 is effective for annual and interim reporting periods beginning on or after December 15, 2018 and the modified retrospective approach is required. The Company is in the process of evaluating the impact the adoption of this standard would have on its financial statements and disclosures.

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

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606), which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In March 2016, the FASB amended the principal-versus-agent implementation guidance and illustrations in the new standard. In April 2016, the FASB amended the guidance on identifying performance obligations and the implementation guidance on licensing in the new standard. In May 2016, the FASB amended the guidance on collectability, noncash consideration, presentation of sales tax and transition in the new standard. In December 2016, the FASB issued ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers, which amends certain narrow aspects of the guidance issued in ASU 2014-09. The new standard will become effective starting on January 1, 2018. Early application is permitted to the original effective date of January 1, 2017. The Company will adopt the standard on January 1, 2018. The standard permits the use of either the modified retrospective method or full retrospective approach for all periods presented. While the Company is continuing to assess all potential impacts of the standard, the Company believes the most significant accounting impact will relate to the timing of the recognition of our license, collaboration, and milestone

revenues.

Note 2 — Net Loss Per Share

The following is the calculation of basic and diluted net loss per share (in thousands, except per share data):

	Three Months Ended		Six Months Ended	
	June 30, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Net loss	$(29,081)	$ (11,611)	$(54,948)	$ (24,066)
Weighted-average shares used in computing net loss per share — basic and diluted	48,218	39,666	44,910	39,629
Net loss per share — basic and diluted	$(0.60)	$ (0.29)	$(1.22)	$ (0.61)

Basic net loss per share is computed by dividing net loss by the weighted average number of vested common shares outstanding during the period. Diluted net loss per share is computed by giving effect to all potentially dilutive common shares, including

outstanding stock options, unvested restricted stock units, warrants, and shares issuable under the Company's Employee Stock Purchase Plan ("ESPP"), by applying the treasury stock method, if they have a dilutive effect. The following instruments were excluded from the computation of diluted net income (loss) per share because their effect would have been antidilutive (in thousands):

	Three and Six Months Ended	
	June 30, 2017	June 30, 2016
Options to purchase common stock	6,170	5,996
Warrants to purchase common stock	310	5,710
Restricted and Performance stock units	461	757
Shares issuable related to the ESPP	18	24
Total shares	6,959	12,487

Note 3 — Supplemental Cash Flow Data

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

	Six Months Ended	
	June 30, 2017	June 30, 2016
Cash paid for interest	$1,270	$ 951
Cash paid for taxes	1	1
Significant non-cash investing and financing activities:		
Debt discount netted against proceeds from long term debt, recorded in equity	—	288
Interest paid on the long-term debt, at inception	—	63
Purchases of property and equipment through accounts payable	484	234
Purchases of property and equipment through accrued liabilities	670	(76)

Note 4 — Research and Development Arrangements

Amgen Inc. ("Amgen")

The Company and Amgen continue activities 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 under the collaboration and option agreement between the Company and Amgen, as amended (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 the development program for omecamtiv mecarbil, and other costs related to the research and development program.

In December 2016, the Company provided notice of its exercise of its option under the Amgen Agreement to co-invest in the Phase 3 development program of omecamtiv mecarbil at the level of $10.0 million in exchange for an incremental royalty from Amgen of up to 1% on increasing worldwide sales of omecamtiv mecarbil outside Japan. In February 2017, the Company provided notice to Amgen of its further exercise of its co-invest option in the additional amount of $30.0 million (i.e. to fully co-invest $40.0 million) in the Phase 3 development program of omecamtiv mecarbil in exchange for a total incremental royalty from Amgen of up to 4% on increasing worldwide sales of omecamtiv mecarbil outside Japan.

The Company made co-investment payments of $6.3 million and $7.5 million during the three and six months ended June 30, 2017, respectively. Because these payments are contingent on Amgen continuing the Phase 3 development program of omecamtiv mecarbil and the benefit to be received in exchange for the payments is not sufficiently separable from the Amgen Agreement the Company reduced research and development revenues by the amount of these payments.

Revenue from Amgen was as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Research and development revenues				
Reimbursement of internal costs	$388	$ 616	$1,279	$ 1,233
Co-investment option payment	(6,250)	—	(7,500)	—
Total revenues from Amgen	$(5,862)	$ 616	$(6,221)	$ 1,233

There were no accounts receivables due from Amgen as of June 30, 2017 and December 31, 2016.

Under the Amgen Agreement, the Company is eligible to receive over $300.0 million in additional development milestone payments which are based on various clinical milestones, including the initiation of certain clinical studies, the submission of an application for marketing authorization for a drug candidate to certain regulatory authorities and the receipt of such approvals. Additionally, the Company is eligible to receive up to $300.0 million in commercial milestone payments provided certain sales targets are met. Due to the nature of drug development, including the inherent risk of development and approval of drug candidates by regulatory authorities, it is not possible to estimate if and when these milestone payments could be achieved or become due. The achievement of each of these milestones is dependent solely upon the results of Amgen's development and commercialization activities.

In 2013, in conjunction with the Amgen Agreement, the Company sold 1,404,100 shares of its common stock to Amgen, subject to certain trading restrictions. In prior periods, the Company considered Amgen to be a related party, due in part to Amgen's equity ownership percentage, and reported revenue under the Amgen Agreement to be revenues from a related party. Effective April 1, 2017, in part due to a decrease in Amgen's equity ownership percentage, the Company no longer considers Amgen to be a related party.

Astellas Pharma Inc. ("Astellas")

The Company and Astellas continue activities focused on the research, development, and commercialization of skeletal muscle activators, including CK-2127107, as novel drug candidates for diseases and medical conditions associated with muscle weakness under the Amended and Restated License and Collaboration Agreement dated December 22, 2014, as amended (the "Astellas Agreement"). The Astellas Agreement was further amended effective April 1, 2017 to adjust the payment mechanism under the Astellas Agreement because Astellas will also be incurring a portion of the development costs for ALS. This amendment had no effect on the accounting for the 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.

In connection with the Astellas Agreement, in 2015, Astellas paid the Company a $30 million non-refundable upfront license fee and a $15.0 million milestone payment relating to Astellas' decision to advance CK-2127107 into Phase 2 clinical development. The Company determined that the license and the research and development services relating to the 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 research term of the Astellas Agreement using the proportional performance model.

In 2016, in connection with an amendment to the Astellas Agreement (the "2016 Astellas Amendment"). Astellas paid the Company a $35.0 million non-refundable upfront amendment fee and an accelerated $15.0 million milestone payment for the initiation of the first Phase 2 clinical trial of CK-2127107 in ALS that was otherwise provided for in the Astellas Agreement, as if such milestone had been achieved upon the execution of the 2016 Astellas Amendment, and committed research and development consideration of $44.2 million (total consideration of $94.2 million), which the Company allocated between units of accounting for license fees and research and development services. The Company allocated $24.9 million of research and development consideration to the license and $19.3 million of the research and development consideration to research and development services, to be recognized as revenue as research and development services are performed.

Astellas' Option on Tirasemtiv

In 2016, in connection with the 2016 Astellas Amendment, Astellas paid the Company a $15.0 million non-refundable option fee for an option for a global collaboration for the development and commercialization of tirasemtiv (the "Option on Tirasemtiv"). Unless exercised, the Option on Tirasemtiv expires following the receipt of the approval letter for tirasemtiv from the FDA.

Prior to Astellas' exercise of the Option on Tirasemtiv, the Company will continue the development of tirasemtiv, including VITALITY-ALS, at its own expense to support regulatory approval in the U.S., EU and certain other jurisdictions and will retain the final decision making authority on the development of tirasemtiv. Therefore, the Company concluded that there was no obligation related to any development services during the option period.

If Astellas exercises the Option on Tirasemtiv:

- the Company will grant Astellas an exclusive license to develop and commercialize tirasemtiv outside the Company's own commercialization territory of North America, Europe and other select countries under a license and collaboration agreement for tirasemtiv (the "License on Tirasemtiv"). Each party would be primarily responsible for the further development of tirasemtiv in its territory and have the exclusive right to commercialize tirasemtiv in its territory.
- the Company will receive an option exercise payment ranging from $25.0 million (if exercise occurs following receipt of data from VITALITY-ALS) to $80.0 million (if exercise occurs following receipt of FDA approval) and a milestone payment of $30.0 million from Astellas associated with the Company's initiation of the open-label extension trial for tirasemtiv (VIGOR-ALS). If Astellas exercises the option after the defined review period following receipt of data from VITALITY-ALS, Astellas will at the time of option exercise reimburse the Company for a share of any additional costs incurred after such review period.
- the parties will share the future development costs of tirasemtiv in North America, Europe and certain other countries (with Cytokinetics bearing 75% of such shared costs and Astellas bearing 25% of such costs), and Astellas will be solely responsible for the development costs of tirasemtiv specific to its commercialization territory.

Contingent upon the successful development of tirasemtiv, the Company may receive from Astellas milestone payments up to $100.0 million for the initial indication and up to $50.0 million for each subsequent indication. If tirasemtiv is commercialized, Astellas will pay the Company royalties (at rates ranging from the mid-teens to twenty percent) on sales of tirasemtiv in Astellas' territory, and the Company will pay Astellas royalties (at rates up to the mid-teens) on sales of tirasemtiv in the Company's territory, in each case subject to various possible adjustments.

The Company concluded that the Option on Tirasemtiv is a substantive option, and is therefore not considered a deliverable at the execution of the 2016 Astellas Amendment. The Company determined that the License on Tirasemtiv is contingent upon the exercise of the Option on Tirasemtiv, and is therefore not effective during the periods presented, since the option has not been exercised as of the latest balance sheet date. In addition, the Company did evaluate the consideration set to be received for the License on Tirasemtiv in relation to the fair value of the License on Tirasemtiv, and determined that it was not being provided at a significant incremental discount.

The Company further determined that the option fee of $15.0 million was deemed to be a prepayment towards the License on Tirasemtiv, and therefore deferred revenue recognition of the option fee either until the Option on Tirasemtiv is exercised or expires unexercised. Unless exercised, the Option on Tirasemtiv expires following the receipt of the approval letter for tirasemtiv from the FDA. If the Option on Tirasemtiv expires unexercised, the $15.0 million received would be added to the 2016 Astellas Amendment consideration, to be allocated to the units of accounting.

Revenue and deferred revenue from Astellas

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

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
License revenues	$ 4,942	$ 1,950	$ 6,388	$ 5,923
Research and development revenues	3,973	2,898	6,698	6,578
Total Revenue from Astellas	$ 8,915	$ 4,848	$ 13,086	$ 12,501

Deferred Revenue reflecting the unrecognized portion of the license revenue, option fee and payment of expenses from the Astellas Agreement was as follows (in thousands):

	June 30, 2017	December 31, 2016
Deferred revenue, current	$ 7,942	$ 8,060
Deferred revenue, non-current	$ 15,067	$ 15,000

There were no accounts receivable due from Astellas at June 30, 2017 and December 31, 2016.

Under the 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 of an application for marketing authorization for a drug candidate to certain regulatory authorities 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 spinal muscular atrophy (“SMA”), amyotrophic lateral sclerosis (“ALS”) and other neuromuscular indications. Additionally, $200.0 million in commercial milestones could be received under the Astellas Agreement provided certain sales targets are met. 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 potential milestone payments were not deemed to be substantive. The Company is eligible to receive up to $2.0 million in research milestone payments under the collaboration for each future potential drug candidate. The Company believes that each of the milestones related to research under the 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. 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 be achieved or become due.

In conjunction with the Astellas Agreement in December 2014, the Company also sold 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, subject to certain trading restrictions. In prior periods, the Company considered Astellas to be a related party, due in part to Astellas’ equity ownership percentage, and reported revenue under the Astellas Agreement to be revenues from a related party. Effective April 1, 2017, in part due to a decrease in Astellas’ equity ownership percentage, the Company no longer considers Astellas to be a related party.

Note 5 — 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 June 30, 2017 and December 31, 2016 were as follows (in thousands):

	June 30, 2017				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Maturity Dates
Cash equivalents — U.S. Treasury and money market funds	$93,824	$ 1	$ —	$93,825	
Short-term investments — U.S. Treasury securities and Agency bonds	$211,564	$ 1	$ (225)	$211,340	7/2017 - 6/2018
Long-term investments — Equity, U.S. Treasury securities and Agency bonds	$19,950	$ 180	$ (43)	$20,087	7/2018 - 8/2018

	December 31, 2016				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Maturity Dates
Cash equivalents — U. S. Treasury securities and money market funds	$55,658	$ —	$ —	$55,658	
Short-term investments — U.S. Treasury securities	$89,396	$ 2	$ (23)	$89,375	1/2017 – 12/2017
Long-term investments — Equity and U.S. Treasury securities	$7,513	$ 176	$ (17)	$7,672	2/2018 – 3/2018

At June 30, 2017 there were no investments that had been in a continuous unrealized loss position for 12 months or longer.

Interest income was as follows (in thousands):

	Three Months	Six Months Ended

	Ended June 30, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Interest income	$694	$105	$1,183	$168

Note 6 — Fair Value Measurements

The Company follows 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.

Fair value of financial assets:

Financial assets measured at fair value on a recurring basis as of June 30, 2017 and December 31, 2016 are classified in the table below in one of the three categories described above (in thousands):

	June 30, 2017 Fair Value Measurements Using			Assets
	Level 1	Level 2	Level 3	At Fair Value
Assets:				
Money market funds	$43,829	$—	$ —	$43,829
U.S. Treasury securities	179,411	—	—	179,411
Agency bonds	—	101,834	—	101,834
Equity securities	178	—	—	178
Total	$223,418	$101,834	$ —	$325,252
Amounts included in:				
Cash and cash equivalents	$93,825	$-	$ —	$93,825
Short-term investments	114,481	96,859	—	211,340
Long-term investments	15,112	4,975	—	20,087
Total	$223,418	$101,834	$ —	$325,252

	December 31, 2016 Fair Value Measurements Using			Assets
	Level 1	Level 2	Level 3	At Fair Value
Assets:				
Money market funds	$52,657	$ —	$ —	$52,657
U.S. Treasury securities	99,872	—	—	99,872
Equity securities	176	—	—	176
Total	$152,705	$ —	$ —	$152,705
Amounts included in:				
Cash and cash equivalents	$55,658	$ —	$ —	$55,658

Short-term investments	89,375	—	—	89,375
Long-term investments	7,672	—	—	7,672
Total	$152,705	$ —	$ —	$152,705

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. When quoted market prices are not available for the specific security, then the Company estimates fair value by using benchmark yields, reported trades, broker/dealer quotes, and issuer spreads; these securities are classified as Level 2. As of June 30, 2017 and December 31, 2016, the Company had no financial assets measured at fair value on a recurring basis using significant 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.

Fair value of financial liabilities:

As of June 30, 2017 and December 31, 2016, the fair value of the long-term debt, payable in installments through year ended 2020, approximated its carrying value of $30.0 million and $29.9 million, respectively, because it is carried at a market observable interest rate, which are considered Level 2.

As of June 30, 2017, the fair value of liabilities related to the sale of future royalties is based on the Company's current estimates of future royalties expected to be paid to RPI over the life of the arrangement, which are considered Level 3 (See Note 9 – "Liability Related to Sale of Future Royalties").

Note 7 — Balance Sheet Components

Accrued liabilities were as follows (in thousands):

	June 30, 2017	December 31, 2016
Accrued liabilities:		
Clinical and preclinical costs	$6,782	$ 10,092
Bonus	2,311	3,800
Other payroll related	2,145	1,888
Consulting and professional fees	1,605	698
Other accrued expenses	702	897
Leasehold improvements	—	672
Total accrued liabilities	$13,545	$ 18,047

Note 8 — Long-Term Debt

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

	June 30, 2017	December 31 2016
Notes payable, gross	$30,000	$ 30,000
Less: Unamortized debt discount	(372)	(472)
Accretion of final payment fee	531	353
Carrying value of notes payable	$30,159	$ 29,881
Less: Current portion of long-term debt	(7,315)	(2,500)
Long-term debt	$22,844	$ 27,381

The Company entered into a loan and security agreement (the "Loan Agreement") with Oxford Finance LLC ("Oxford") and Silicon Valley Bank ("SVB") (Oxford and SVB, collectively the "Lenders") to fund its working capital and other general corporate needs. The Loan Agreement provides for term loans of up to $40.0 million in aggregate

and warrants that are exercisable upon issuance and will remain exercisable for five years from issuance or the closing of a merger consolidation transaction in which the Company is not the surviving entity.

Under the Loan Agreement, the Company drew down $15.0 million in October 2016 and an additional $15.0 million in February 2016 and issued warrants to purchase 65,189 shares of the Company's common stock at an exercise price of $6.90 and warrants to purchase 68,285 shares of the Company's common stock at an exercise price of $6.59 per share. These draw downs bear interest at a rate of 7.5% per annum.

The Company is required to repay the outstanding principal in 36 equal installments beginning October 2017 through October 2020 and to make a final payment fee of 4.0% of the amounts of the Term Loans drawn payable on the earlier of (i) the prepayment of the Term Loans or (ii) the Maturity Date. The loan carries prepayment penalties of 3.0% and 2.0% for prepayment within one and two years, respectively, of the loan origination and 1.0% thereafter.

The Company allocated a portion of the gross proceeds from each draw down under the Loan Agreement to the underlying warrants, using the relative fair value method. This resulted in the allocation of $0.6 million of the draw down proceeds to the warrants, which was accounted for as debt discount. Debt discount is being amortized over the term of the debt, and recorded in interest expense in the statement of operations. The fair value of the warrants was determined using the Black-Scholes pricing model and are classified as equity.

The Loan Agreement contains customary representations and warranties and customary affirmative and negative covenants applicable to the Company and its subsidiaries, including, among other things, restrictions on dispositions, changes in business, management, ownership or business locations, mergers or acquisitions, indebtedness, encumbrances, distributions, investments,

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

The Company recorded interest on principal, amortization of the debt discount and debt issuance costs, and the accretion of the final payments as interest expense of $0.8 million and $0.7 million for the three months ended June 30, 2017 and 2016, respectively and $1.5 million and $1.3 million for the six months ended June 30, 2017 and 2016, respectively. The effective interest rate on the Loan Agreement, including the amortization of the debt discount and issuance cost, and the accretion of the final payment, was 9.3% for both the three and six months ended June 30, 2017 and 2016.

Future minimum payments under the Loan Agreement, as of June 30, 2017 are as follows (in thousands):

Remainder of 2017	$3,635
2018	11,743
2019	10,982
2020	8,938
Total minimum payments	35,298
Less: Interest and final payment	(5,298)
Notes payable, gross	$30,000

Note 9 - Liabilities Related to Sale of Future Royalties

In February 2017, the Company entered into a Royalty Purchase Agreement (the "Royalty Agreement") with RPI Finance Trust ("RPI"), an entity related to Royalty Pharma. Under the Royalty Agreement, the Company sold a portion of the Company's right to receive royalties on potential net sales of omecamtiv mecarbil (and potentially other compounds with the same mechanism of action) under the Amgen Agreement to RPI for a payment of $90.0 million (the "Royalty Monetization"). The Royalty Monetization is non-refundable, even if omecamtiv mecarbil is never commercialized. The Company accounts for the Royalty Monetization as a liability reported as Liabilities related to sale of future royalties, primarily because the Company has significant continuing involvement in generating the royalty stream under the Amgen Agreement, including the Company's option to co-invest in the Phase 3 development program of omecamtiv mecarbil.

Also in February 2017, pursuant to a concurrently-executed Common Stock Purchase Agreement with RPI, the Company issued 875,656 shares of its common stock to RPI for $10.0 million (the "RPI Common Stock").

The Company concluded that there are two units of accounting for the Royalty Monetization and the RPI Common Stock: (1) the liability related to sale of future royalties and (2) the RPI Common Stock. The Company allocated the $90 million from the Royalty Monetization and the $10 million from the RPI Common Stock among the two units of accounting on a relative fair value basis. The Company determined the fair value for the liability related to sale of future royalties at the time of the Royalty Monetization to be $96.7 million, with an effective annual non-cash interest rate of 17%. The Company determined the fair value of the RPI Common Stock at March 31, 2017 to be $8.1 million,

based on the closing stock price at the transaction date and adjusted for the trading restrictions.

The Company allocated the transaction consideration on a relative fair value basis to the liability and the common stock, as follows (in millions):

	Allocated Consideration
Units of Accounting:	
Liability related to sale of future royalties	$ 92.3
Common stock	7.7
Total consideration	$ 100.0

The Company allocated $1.8 million of transaction costs incurred in connection with the Royalty Monetization and the RPI Common Stock to the liability and common stock in proportion to the allocation of proceeds to those components. The transaction costs allocated to the liability will be amortized to non-cash interest expense over the estimated term of the Royalty Agreement.

The following table shows the activity within liabilities related to sale of future royalties during the six months ended June 30, 2017 (in thousands):

Liability related to sale of future royalties at February 1, 2017	$92,300
Non-cash interest expense recognized	6,012
Liability related to sale of future royalties at June 30, 2017	98,312
Less: Unamortized transaction costs	(1,655)
Carrying value of liability related to sale of future royalties at June 30, 2017	96,657

Note 10 — Stockholders' Equity

During the second quarter of 2017, the Company completed a secondary offering of its common stock and issued 6,049,000 shares for net proceeds of $82.8 million, before expenses.

Accumulated Other Comprehensive Loss

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

In the first six months of 2017 and 2016, the Company recorded insignificant amounts of unrealized gains (losses) in available-for-sale securities in accumulated other comprehensive loss.

Warrants

In June 2012, the Company issued warrants in connection with two separate, concurrent offerings for our securities. These warrants had an expiration date of June 25, 2017. During the six months ended June 30, 2017, the Company issued 3,240,549 shares of Common stock for exercises of these warrants.

Pursuant to the Loan Agreement described in Note 8 "Long Term Debt," the Company issued warrants to purchase 65,189 shares of the Company's common stock at an exercise price of $6.90 per share and additional warrants to purchase 68,285 shares of the Company's common stock at an exercise price of $6.59 per share. In January 2017, the Company issued 16,126 shares of common stock related to cashless exercises of some of these warrants.

Committed Equity Offering

In September 2015, the Company and Cantor Fitzgerald & Co. entered into a Committed Equity Offering (the "CE Offering") that is an at-the-market issuance sales agreement (the "Cantor Fitzgerald Agreement") pursuant to which the Company could issue and sell shares of common stock having an aggregate offering price of up to $40.0 million. During the three and six months ended June 30, 2017, the Company issued 987,068 shares and 2,425,625 shares under

the Cantor Fitzgerald Agreement for net proceeds totaling $12.5 million and $29.9 million, respectively, completing the sale of all common stock subject to the Cantor Fitzgerald Agreement.

Equity Incentive Plan

In May 2017, the Company's stockholders approved an amendment to the Amended and Restated 2004 Equity Incentive Plan (the "2004 Equity Incentive Plan") to increase the number of authorized shares reserved for issuance under the 2004 Equity Incentive Plan by 3.9 million shares. As of June 30, 2017, 3.8 million authorized shares were available for grant under the 2004 Equity Incentive Plan.

Total employee stock-based compensation expenses were $2.2 million and $1.8 million for the three months ended June 30, 2017 and 2016, respectively and $4.1 million and $3.4 million for the six months ended June 30, 2017 and 2016, respectively.

Stock Options

Stock option activity under the 2004 Equity Incentive Plan, for the six months ended June 30, 2017, was as follows:

	Stock Options Outstanding	Weighted Average Exercise Price per Share of Stock Options
Balance at December 31, 2016	5,192,813	$ 9.27
Options granted	1,169,624	11.49
Options exercised	(24,055)	7.09
Options forfeited/expired	(168,294)	34.25
Balance at June 30, 2017	6,170,088	$ 9.02

Restricted Stock Units

Restricted stock unit activity for the six months ended June 30, 2017 was as follows:

	Number of Shares	Weighted Average Award Date Fair Value per Share
Restricted stock units outstanding at December 31, 2016	64,502	$ 7.19
Restricted stock units granted	269,000	10.60
Restricted stock units released	(43,500)	6.67
Restricted stock units forfeited	(500)	6.67
Unvested restricted stock units outstanding at June 30, 2017	289,502	$ 10.44

Restricted Stock Units that Contain Performance Conditions

Performance stock unit activity was as follows:

	Number of Shares	Weighted Average Award Date Fair Value per Share
Performance stock units outstanding at December 31, 2016	685,000	$ 7.00
Restricted stock units granted	—	—
Restricted stock units released	(171,250)	7.00
Restricted stock units forfeited	(342,500)	7.00
Performance stock units outstanding at June 30, 2017	171,250	$ 7.00

Note 11 — Interest and Other Income, Net

Interest and other income, net for the three and six months ended June 30, 2017 and 2016 primarily consisted of interest income generated from the Company’s cash, cash equivalents and investments.

Note 12 — Commitments and Contingencies

Commitments

Operating Lease

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. During March 2016, the Company amended the lease agreement to include certain additional operating expenses, related to the replacement of two boilers. The Company recognizes rent expense on a straight-line basis over the lease period. Rent expense was $0.9 million and $0.8 million, respectively, for the three months ended June 30, 2017 and 2016 and $1.8 million and $1.7 million, respectively, for the six months ended June 30, 2017 and 2016.

Co-invest option

In December 2016, the Company agreed to exercise its option to co-invest $10.0 million in the Phase 3 development program of omecamtiv mecarbil under the Amgen Agreement. In February 2017, the Company provided notice to Amgen of its further exercise of its co-investment option in the additional amount of $30.0 million (i.e. to co-invest $40.0 million) in the Phase 3 development program of omecamtiv mecarbil under the Amgen Agreement. By exercising its option and fully co-funding $40.0 million, the Company will be eligible to receive a total incremental royalty of up to 4% on increasing worldwide sales of omecamtiv mecarbil outside of Japan and have the right to co-promote omecamtiv mecarbil in institutional care settings in North America, with reimbursement by Amgen for certain sales force activities.

Quarterly co-investment payments are contingent on Amgen continuing the Phase 3 development program of omecamtiv mecarbil. As of June 30, 2017, future minimum payments due to Amgen were as follows (in thousands):

Remainder of 2017	$12,500
2018	18,750
Total	$31,250

Contingencies

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

possible to determine the maximum potential amount of exposure under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular indemnification obligation. Such indemnification obligations may not be subject to maximum loss clauses. Management is not currently aware of any matters that could have a material adverse effect on the financial position, results of operations or cash flows of the Company.

Note 13 — Income Taxes

The Company did not record a provision for income tax for the three and six months ended June 30, 2017 because the Company expects to report a net tax loss for the year ending December 31, 2017.

The Company 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.

ITEM 2. 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.

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 2017;
- 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. ("Amgen") 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, the non-clinical studies, and chemistry, manufacturing, and controls ("CMC") activities of our drug candidates and other compounds, and the significance and utility of such results;
- anticipated interactions with regulatory authorities;
- the further development of tirasemtiv for the potential treatment of amyotrophic lateral sclerosis ("ALS");
- the expected acceptability by regulatory authorities of the effects of tirasemtiv on slow vital capacity or other measures of clinical benefit related to respiratory function in patients with ALS as Phase 3 clinical trial endpoints 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 further development of omecamtiv mecarbil for the potential treatment of heart failure;
- our expected roles in research, development, or commercialization under our strategic alliances with Amgen and Astellas;
    - the properties and potential benefits of, and the potential market opportunities for, our drug candidates and other compounds, including the potential indications for which they may be developed;
- the sufficiency of the clinical trials conducted with our drug candidates to demonstrate that they are safe and efficacious;
- our receipt of milestone payments, royalties, reimbursements, and other funds from current or future partners under strategic alliances, such as with Amgen or Astellas;
- our ability to continue to identify additional potential drug candidates that may be suitable for clinical development;
- our plans or ability to commercialize drugs with or without a partner, including our intention to develop sales and marketing capabilities;
- the focus, scope, and size of our research and development activities and programs;
- the utility of our focus on the biology of muscle function, and our ability to leverage our experience in muscle contractility to other muscle functions;
- our ability to protect our intellectual property and to avoid infringing the intellectual property rights of others;
- future payments and other obligations under loan and lease agreements;

- potential competitors and competitive products;
- retaining key personnel and recruiting additional key personnel; 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 appropriate clinical trial endpoints 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 other cardiac muscle activators, including decisions to postpone or discontinue research or development activities relating to omecamtiv mecarbil and other cardiac muscle activators;
- 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, as well as Astellas' decisions with respect to its option to enter into a global collaboration for the development and commercialization of tirasemtiv;
- 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 or commercial materials;
- failure by our contract research organizations, contract manufacturing organizations, and other vendors to properly fulfill their obligations or otherwise perform as expected;
- results from non-clinical studies that may adversely impact the timing or the further development of our drug candidates and other compounds;
- the possibility that the FDA or foreign regulatory agencies may delay or limit our or our partners' ability to conduct clinical trials or may delay or withhold approvals for the manufacture and sale of our products;
- changing standards of care and the introduction of products by competitors or alternative therapies for the treatment of indications we target that may limit the commercial potential of our drug candidates;
- difficulties or delays in achieving market access and reimbursement for our drug candidates and the potential impacts of health care reform;
- changes in laws and regulations applicable to drug development, commercialization, or reimbursement;
- the uncertainty of protection for our intellectual property, whether in the form of patents, trade secrets, or otherwise;
- potential infringement or misuse by us of the intellectual property rights of third parties;
- activities and decisions of, and market conditions affecting, current and future strategic partners;
- accrual information provided by our contract research organizations ("CROs"), contract manufacturing organizations ("CMOs"), 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.

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When used in this report, unless otherwise indicated, “Cytokinetics,” “the Company,” “we,” “our” and “us” refers to Cytokinetics, Incorporated. CYTOKINETICS, and our logo used alone and with the mark CYTOKINETICS, are registered service marks and trademarks of Cytokinetics. Other service marks, trademarks and trade names referred to in this report are the property of their respective owners.

Overview

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

Our drug candidates currently in clinical development are tirasemtiv, CK-2127107, and omecamtiv mecarbil. Tirasemtiv is being evaluated for the potential treatment of ALS. CK-2127107 is being evaluated for the potential treatment of spinal muscle atrophy (“SMA”) and chronic obstructive pulmonary disease (“COPD”) and for the potential use in other indications associated with muscle weakness (including frailty and ALS) under a strategic alliance with Astellas established in 2013 and expanded in 2014 and 2016. Omecamtiv mecarbil is being evaluated for the potential treatment of heart failure under a strategic alliance with Amgen established in 2006.

Skeletal Muscle Contractility Program

Overview

Tirasemtiv, a fast skeletal muscle troponin activator (“FSTA”), is the lead drug candidate from our skeletal muscle contractility program and 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 conducting a Phase 3 development program for tirasemtiv for ALS and are preparing for the potential commercialization of tirasemtiv in North America and Europe.

We retain exclusive rights to tirasemtiv, subject to Astellas’ option for a global collaboration for the development and commercialization of tirasemtiv (the “Option on Tirasemtiv”) described below. In collaboration with Astellas, we are also developing CK-2127107, a next-generation FSTA, for potential indications associated with muscle weakness, including SMA, COPD, frailty, and ALS.

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. Both have 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.

Astellas’ Option on Tirasemtiv.

In 2016, we and Astellas expanded our collaboration in skeletal muscle activators to include ALS (the “2016 Astellas Amendment”). Under the 2016 Astellas Amendment, we granted Astellas the Option on Tirasemtiv. Prior to Astellas’ exercise of the Option on Tirasemtiv, we will continue the development of tirasemtiv, including VITALITY-ALS

(Ventilatory Investigation of Tirasemtiv and Assessment of Longitudinal Indices after Treatment for a Year in ALS), at our own expense to support regulatory approval in the U.S., EU and certain other jurisdictions and will retain the final decision making authority on the development of tirasemtiv. If Astellas exercises the Option on Tirasemtiv, we will grant Astellas an exclusive license to develop and commercialize tirasemtiv outside our own commercialization territory of North America, Europe and other select countries under a license and collaboration agreement for tirasemtiv (the "License on Tirasemtiv"); each party would be primarily responsible for the further development of tirasemtiv in its territory and have the exclusive right to commercialize tirasemtiv in its territory.

Should Astellas exercise this option, we will receive an option exercise payment ranging from $25.0 million (if exercise occurs following receipt of data from VITALITY-ALS) to $80.0 million (if exercise occurs following receipt of FDA approval) and a milestone payment of $30.0 million from Astellas associated with the Company's initiation of the open-label extension trial for tirasemtiv. If Astellas exercises the option after the defined review period following receipt of data from VITALITY-ALS, Astellas will at the time of option exercise reimburse us for a share of any additional costs incurred after such review period. In addition, the parties will share the future development costs of tirasemtiv in North America, Europe and certain other countries (with Cytokinetics bearing 75% of such shared costs and Astellas bearing 25% of such costs), and Astellas will be solely responsible for the development costs of tirasemtiv specific to its commercialization territory.

Contingent upon the successful development of tirasemtiv, we may receive from Astellas milestone payments up to $100.0 million for the initial indication and up to $50.0 million for each subsequent indication. If tirasemtiv is commercialized, Astellas will pay us royalties (at rates ranging from the mid-teens to twenty percent) on sales of tirasemtiv in Astellas' territory, and we will pay Astellas royalties (at rates up to the mid-teens) on sales of tirasemtiv in our territory, in each case subject to various possible adjustments.

Tirasemtiv: Clinical Development

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

Patients enrolled in VITALITY-ALS received two-weeks of open-label treatment with tirasemtiv administered at 250 mg/day and were randomized to double-blind treatment with placebo or one of three target tirasemtiv dose levels (250 mg/day, 375 mg/day, 500 mg/day) in a 3:2:2:2 ratio for a total of 48 weeks of randomized, double-blind, placebo-controlled treatment. Then in a four-week double-blind, tirasemtiv withdrawal phase, patients on tirasemtiv are randomized either to continue the double-blind tirasemtiv dose they were receiving or to be withdrawn to placebo in a 1:1 ratio. Patients who had been receiving placebo during the 48 weeks of double-blind, placebo-controlled treatment will continue to receive placebo. VITALITY-ALS is being conducted in 81 centers in 11 countries in North America and Europe and includes most of the sites which participated in our Phase 2b clinical trial of tirasemtiv, BENEFIT-ALS (Blinded Evaluation of Neuromuscular Effects and Functional Improvement with Tirasemtiv in ALS).

In January 2016, we amended the protocol of VITALITY-ALS to increase enrollment from approximately 445 patients to approximately 600 patients. Increasing the number of patients enrolled increases the statistical power to detect a difference in the primary efficacy endpoint (change from baseline in SVC at 24 weeks) between tirasemtiv and placebo.

In August 2016, we announced the completion of patient enrollment in VITALITY-ALS.

In March 2017, we convened the third Data Monitoring Committee Meeting for VITALITY-ALS to review unblinded safety and efficacy data; the Committee recommended continuing the trial without modification.

In June 2017, we amended the protocol and the statistical analysis plan for VITALITY-ALS. In consideration of feedback we received on the clinical meaningfulness of the different secondary endpoints and a review of the blinded aggregate event rates, we prioritized the analyses of two of the pre-specified secondary endpoints – change in baseline in any of the three respiratory domains of the ALSFRS-R or death and slope of the change from baseline in muscle strength – both evaluated over the entire 48 weeks of double- blind placebo- controlled treatment. We believe that both of these endpoints are viewed as especially clinically meaningful by ALS clinicians, regulatory authorities and payers. We wanted to ensure that both endpoints would be formally analyzed and elevated in the statistical hierarchy of pre-specified secondary endpoints.

We have a $1.5 million grant from The ALS Association (the “ALSA Grant”) to support the conduct of VITALITY-ALS as well as the collection of clinical data and plasma samples from patients in VITALITY-ALS in order to help advance the discovery of potentially useful biomarkers in ALS. The grant provides funding for collaboration among Cytokinetics, The ALS Association and the Barrow Neurological Institute to enable plasma samples collected from patients enrolled in VITALITY-ALS to be added to The Northeastern ALS Consortium (NEALS) Repository, a resource for the academic research community to identify biomarkers that may help to assess disease progression and underlying disease mechanisms in ALS. To date, Cytokinetics has achieved two milestones

under the ALSA Grant receiving $0.8 million in accordance with the ALSA Grant. As of June 30, 2017, we recorded $0.3 million as grant revenue as qualified expenses were incurred and approved by management.

In March 2017, in collaboration with Origent Data Sciences, Inc. we announced the advancement of our research collaboration to prospectively validate Origent's computer model to predict the course of ALS disease progression using data from VITALITY-ALS. This collaboration, funded by a grant from The ALS Association to Origent, is designed to enable the first prospective validation of their predictive model in a clinical trial for ALS.

VIGOR-ALS: In October 2016, we initiated VIGOR-ALS (Ventilatory Investigations in Global Open-Label Research in ALS), an open-label extension clinical trial designed to assess the long-term safety and tolerability of tirasemtiv in patients with ALS who have completed their participation in VITALITY-ALS. VIGOR-ALS will provide supplemental data on the effects of the long-term use of tirasemtiv.

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. We cannot yet predict if or when this may occur. Our expenditures are expected to increase as we continue to progress tirasemtiv towards potential registration and commercialization.

CK-2127107 and Other Skeletal Muscle Activators

Astellas Strategic Alliance.

CK-2127107, a next-generation FSTA, has been granted orphan drug designation for the potential treatment of SMA by the FDA and is being developed jointly by Cytokinetics and Astellas under the Amended and Restated License and Collaboration Agreement dated December 22, 2014, as further amended in 2016 and 2017 (the "Astellas Agreement"). In 2013, we formed a collaboration with Astellas with the primary objective of advancing novel therapies for diseases and medical conditions associated with muscle impairment and weakness. Under the collaboration, we exclusively licensed to Astellas rights to co-develop and potentially co-commercialize CK-2127107 in non-neuromuscular indications. In 2014, we and Astellas agreed to expand the collaboration to include certain neuromuscular indications, including SMA, and to advance CK-2127107 into Phase 2 clinical development, initially in SMA. Under the 2016 Astellas Amendment, Cytokinetics and Astellas further amended the collaboration agreement to expand our collaboration to include the development of CK-2127107 for the potential treatment of ALS, as well as the possible development in ALS of other fast skeletal regulatory activators previously licensed by us to Astellas. The 2016 Astellas Amendment also extended the existing joint research program focused on the discovery of additional next-generation skeletal muscle activators through 2017 and included sponsored research at Cytokinetics. 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. Cytokinetics also retains an option to co-promote collaboration products containing FSTAs 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. Astellas will reimburse Cytokinetics for certain expenses associated with its co-promotion activities.

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 Astellas

Agreement. If Astellas commercializes any collaboration products, we 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. We can 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.

CK-2127107: Clinical Development

SMA Clinical Development: Cytokinetics in collaboration with Astellas is conducting a Phase 2 clinical development program. Cytokinetics started a Phase 2 clinical trial of CK-2127107 in patients with SMA in December 2015. The clinical trial is designed to assess effects of CK-2127107 on multiple measures of muscle function in both ambulatory and non-ambulatory patients with SMA, a

severe, genetic neuromuscular disease that leads to debilitating muscle wasting and weakness. The primary objective of this double-blind, randomized, placebo-controlled clinical trial is to determine the potential pharmacodynamic effects of a suspension formulation of CK-2127107 following multiple oral doses in patients with Type II, Type III, or Type IV SMA. Secondary objectives are to evaluate the safety, tolerability and pharmacokinetics of CK-2127107. The trial will enroll seventy-two patients in two sequential, ascending dose cohorts (two cohorts of 36 patients each, stratified approximately half ambulatory and half non-ambulatory).

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

In March 2017, we announced that we completed enrollment of Cohort 1 and the second cohort of the Phase 2 clinical trial was open to enrollment. We anticipate that the trial will complete enrollment in 2017 and report data in Q1 2018.

COPD Clinical Development: In June 2016, Astellas, in collaboration with Cytokinetics, started a Phase 2 clinical trial of CK-2127107 in patients with COPD. Astellas is conducting this randomized, double-blind, placebo controlled two period crossover clinical trial designed to assess the effect of CK-2127107 on physical function in patients with COPD. The trial is expected to enroll approximately 40 patients in the United States and is designed to assess the effect of CK-2127107 compared to placebo on exercise tolerance. Additionally, the trial will assess the cardiopulmonary and neuromuscular effect of CK-2127107 relative to placebo and the effect of CK-2127107 on resting spirometry relative to placebo. The safety, tolerability and pharmacokinetics of CK-2127107 also will be assessed. We expect Astellas to continue enrollment in this Phase 2 clinical trial of CK-2127107 in patients with COPD in 2017.

Frailty Clinical Development: In June 2017, Astellas, in collaboration with Cytokinetics, started a Phase 1b clinical trial of CK-2127107 in elderly subjects with limited mobility. The clinical trial is expected to enroll at least 60 subjects in the United States who are 70 to 89 years of age with limited mobility. Patients will be randomized to one of two treatment sequences in a 1:1 ratio to receive both CK-2127107 and placebo over two 14-day treatment periods, separated by a 14-day washout period. During treatment periods, patients will receive 500 mg of CK-2127107 or placebo twice daily, except on days 1 and 14, when they receive 500 mg of CK-2127107 once daily. The total study duration including the screening period and follow-up visit will be approximately 12 weeks. The trial is designed to assess the effect of CK-2127107 on skeletal muscle fatigue assessed as change from baseline versus 14 days of treatment in sum of peak torque during isokinetic knee extensions. Additionally, the trial will assess the effects of CK-2127107 on physical performance via a short physical performance battery, stair-climb test and 6-minute walk test. In addition, the safety, tolerability and pharmacokinetics of CK-2127107 will be assessed.

ALS Clinical Development: In July 2017, in collaboration with Astellas, we started FORTITUDE-ALS (Functional Outcomes in a Randomized Trial of Investigational Treatment with CK-2127107 to Understand Decline in Endpoints – in ALS), a Phase 2 clinical trial of CK-2127107 in patients with ALS. Approximately 450 eligible ALS patients from centers in the U.S. and Canada will be randomized (1:1:1:1) to receive either 150 mg, 300 mg or 450 mg of CK-2127107 dosed orally twice daily or placebo for 12 weeks. The primary efficacy endpoint is the change from baseline in the percent predicted SVC at 12 weeks. Secondary endpoints include slope of the change from baseline in the mega-score of muscle strength measured by hand held dynamometry (HHD) and handgrip dynamometry in patients on CK-2127107; change from baseline in the ALS Functional Rating Scale – Revised (ALSFRS-R); incidence

and severity of treatment-emergent adverse events (TEAEs); and plasma concentrations of CK-2127107 at the sampled time points during the study. Exploratory endpoints will be measured including the effect of CK-2127107 versus placebo on self-assessments of respiratory function made at home by the patient with help as needed by the caregiver; disease progression through quantitative measurement of speech production characteristics over time; disease progression through quantitative measurement of handwriting abilities over time; and change from baseline in quality of life (as measured by the ALSAQ-5) in patients on CK 2127107.

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 2016 Astellas Amendment, the joint research program will continue through 2017 and Astellas will reimburse us for certain research activities we perform.

Cardiac Muscle Contractility Program

Overview

Our lead drug candidate from our cardiac contractility program is omecamtiv mecarbil, a novel cardiac muscle myosin activator. We expect omecamtiv mecarbil to be developed as a potential treatment across the continuum of care in heart failure both for use in the hospital setting and for use in the outpatient setting. Omecamtiv mecarbil is the subject of a Phase 3 development program under our strategic alliance with Amgen Inc. (“Amgen”).

Amgen Strategic Alliance

We have a collaboration and option agreement, as amended, with Amgen to discover, develop, and commercialize novel small molecule therapeutics designed to activate cardiac muscle, including omecamtiv mecarbil, for the potential treatment of heart failure (the “Amgen Agreement”). Under the Amgen Agreement, Amgen has exclusive, worldwide rights to develop and commercialize omecamtiv mecarbil and related compounds subject to our specified development and commercial participation rights. Amgen has also entered an alliance with Servier for exclusive commercialization rights in Europe as well as the Commonwealth of Independent States, including Russia. Servier contributes funding for development and provides strategic support to the program.

Under the Amgen Agreement we are eligible for potential additional pre-commercialization and commercialization milestone payments of over $600.0 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 the Phase 3 development costs of omecamtiv mecarbil and other drug candidates under the collaboration.

In December 2016, we provided notice of our exercise of our option under the Amgen Agreement to co-invest in the Phase 3 development program of omecamtiv mecarbil at the level of $10.0 million in exchange for an incremental royalty from Amgen of up to 1% on increasing worldwide sales of omecamtiv mecarbil outside Japan. In February 2017, we provided notice to Amgen of our further exercise of our co-invest option in the additional amount of $30.0 million (i.e. to fully co-invest $40.0 million) in the Phase 3 development program of omecamtiv mecarbil. By exercising our option and fully co-funding $40.0 million, we will be eligible to receive a total incremental royalty of up to 4% on increasing worldwide sales of omecamtiv mecarbil outside of Japan and have the right to co-promote omecamtiv mecarbil in institutional care settings in North America, with reimbursement by Amgen for certain sales force activities. A joint commercial operating team comprising representatives of Cytokinetics and Amgen will then be responsible for the commercialization program of omecamtiv mecarbil.

Omecamtiv Mecarbil: Clinical Development

GALACTIC-HF. GALACTIC-HF (Global Approach to Lowering Adverse Cardiac Outcomes Through Improving Contractility in Heart Failure) is a Phase 3 cardiovascular outcomes clinical trial of omecamtiv mecarbil which is being conducted by Amgen, in collaboration with Cytokinetics. The primary objective of this double-blind, randomized, placebo-controlled multicenter clinical trial is to determine if treatment with omecamtiv mecarbil when added to the current standard of care is superior to standard of care plus placebo in reducing the risk of cardiovascular death or heart failure events in patients with high risk chronic heart failure and reduced ejection fraction. GALACTIC-HF is being conducted under a Special Protocol Assessment ("SPA") with the U.S. FDA. GALACTIC-HF is planned to enroll approximately 8,000 symptomatic chronic heart failure patients in over 800 sites in 34 countries who are either currently hospitalized for a primary reason of heart failure or have had a hospitalization or admission to an emergency room for heart failure within one year prior to screening. In order to be eligible to participate in GALACTIC-HF patients should have an LVEF ≤ 35%, be NYHA class II to IV, and have an elevated BNP or NT-proBNP. Patients will be randomized to either placebo or omecamtiv mecarbil with dose titration up to a maximum dose of 50 mg twice daily based on the plasma concentration of omecamtiv mecarbil after initiation of drug therapy. The primary endpoint is a composite of time to cardiovascular death or first heart failure

event, which is defined as either a hospitalization for heart failure or other urgent treatment for worsening heart failure. Secondary endpoints include time to cardiovascular death; patient reported outcomes as measured by the Kansas City Cardiomyopathy Questionnaire Total Symptom Score; time to first heart failure hospitalization; and all-cause death.

Cytokinetics and Amgen are also planning a potential exercise performance/cardiac function clinical trial to be conducted by Cytokinetics. Amgen will be responsible for reimbursing us for the out-of-pocket development costs associated with this clinical trial.

In April 2016, we announced the start of a Phase 2 clinical trial of omecamtiv mecarbil in Japanese subjects with chronic heart failure and reduced ejection fraction. In August 2017, we announced that this trial met its pharmacokinetic primary endpoint and demonstrated statistically significant improvements in systolic ejection time, a secondary endpoint. We are eligible to earn a $10 million milestone payment from Amgen upon the first dosing of a patient in Japan in GALACTIC-HF.

Presentations and Publications

In May 2017, we announced that results from the dose escalation phase of COSMIC-HF (Chronic Oral Study of Myosin Activation to Increase Contractility in Heart Failure), our Phase 2 clinical trial of omecamtiv mecarbil, were presented in a Poster Session at the Rapid Fire Abstract Presentation at Heart Failure 2017, the annual congress of the Heart Failure Association of the European Society of Cardiology.

Ongoing Research in Cardiac Muscle Contractility.

We continued our joint research program with Amgen directed to next-generation compounds in our cardiac muscle contractility program in 2016. We expect to continue our joint research program with Amgen in 2017. Under the Amgen Agreement, Amgen reimburses us for certain research activities we perform.

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, other major functions of muscle play 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.

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 appropriate clinical trial endpoints to support the registration of tirasemtiv for the treatment of ALS;
- the FDA and/or other regulatory authorities may not accept the data from the clinical trials of tirasemtiv as sufficient to determine the safest and most effective dose of tirasemtiv for the treatment of ALS;
- decisions made by Amgen with respect to the development of omecamtiv mecarbil and by Astellas with respect to the development of CK-2127107;
- the uncertainty of the timing of the initiation and completion of patient enrollment and treatment in our or our partners' clinical trials;

- the possibility of delays in the collection of clinical trial data and the uncertainty of the timing of the analyses of our clinical trial data after these trials have been initiated and completed;
- our potential inability to obtain additional funding and resources for our development activities on acceptable terms, if at all, including, but not limited to, our potential inability to obtain or retain partners to assist in the design, management, conduct and funding of clinical trials;
- failure by our clinical trial sites, clinical research organizations, clinical manufacturing organizations, and other third parties supporting our or our partners' clinical trials to fulfill their obligations or otherwise perform as expected;
- delays or additional costs in manufacturing of our drug candidates for clinical trial use, including developing appropriate formulations of our drug candidates;
- the uncertainty of clinical trial results, including variability in patient response;
- the uncertainty of obtaining FDA or other foreign regulatory agency approval required for the clinical investigation of our drug candidates;
- the uncertainty related to the development of commercial scale manufacturing processes and qualification of a commercial scale manufacturing facility;
- the possibility that results from non-clinical studies may adversely impact the timing or further development of our drug candidates; and
- possible delays in the characterization, formulation and manufacture, packaging, labeling and distribution of drug candidates and other compounds.

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

Results of Operations

Revenues

Total revenues for the three and six months ended June, 2017 and 2016, respectively, were as follows (in thousands):

	Three Months Ended			Six Months Ended		
	June 30, 2017	June 30, 2016	Increase (Decrease)	June 30, 2017	June 30, 2016	Increase (Decrease)
Research and development, grant and other revenues, net	$(1,889)	$3,852	$ (5,741)	$818	$8,299	$ (7,481)
License revenues from related parties	4,942	1,950	2,992	6,388	5,923	465
Total revenues	$3,053	$5,802	$ (2,749)	$7,206	$14,222	$ (7,016)

Revenues for the three and six months ended June 30, 2017 were $3.1 million and $7.2 million, respectively, compared to $5.8 million and $14.2 million for the corresponding periods in 2016. Revenues for the first six months of 2017 included $6.7 million of research and development revenues and $6.4 million of license revenues from our collaboration with Astellas, and $1.3 million of research and development revenues from our collaboration with Amgen. Revenues for the first six months of 2017 were offset by $7.5 million (out of the total of $40 million) for payments to Amgen related to our option to co-fund the Phase 3 development program of omecamtiv mecarbil in exchange for an increased royalty upon potential commercialization. By exercising our option and fully co-funding $40.0 million, we become eligible to receive a total incremental royalty of up to 4% on increasing worldwide sales of omecamtiv mecarbil outside of Japan and have the right to co-promote omecamtiv mecarbil in institutional care settings in North America, with reimbursement by Amgen for certain sales force activities.

Research and Development Expenses

Research and development expenses for the three and six months ended June 30, 2017 and 2016, respectively, were as follows (in thousands):

	Three Months Ended			Six Months Ended		
	June 30, 2017	June 30, 2016	Increase	June 30, 2017	June 30, 2016	Increase
Research and development expenses	$19,809	$9,723	$10,086	$39,098	$23,256	$15,842

Research and development expenses for the three and six months ended June 30, 2017 increased to $19.8 million and $39.1 million, respectively, from $9.7 million and $23.3 million for the same periods in 2016, primarily due to increased clinical activity, including activity for VITALITY-ALS and other activities intended to support potential regulatory filings and registration of tirasemtiv in North America and Europe, as well as increased personnel.

	Three Months Ended