UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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, 2019

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: 001-37609

MYOKARDIA, INC.
(Exact name of registrant as specified in its charter)

Delaware	**44-5500552**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

333 Allerton Ave.
South San Francisco, CA
(Address of principal executive offices)

94080
(Zip Code)

(650) 741-0900
(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock	MYOK	NASDAQ Global Select Market

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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	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 ☒

The number of outstanding shares of the registrant's common stock on August 1, 2019 was 46,117,975 shares.

MYOKARDIA, INC.

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PART I—FINANCIAL INFORMATION

Item 1. Unaudited Condensed Consolidated Financial Statements

MYOKARDIA, INC.

Condensed Consolidated Balance Sheets
(In thousands, except share and per share amounts)
(Unaudited)

	June 30, 2019	December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$ 443,693	$ 246,122
Short-term investments	114,792	68,564
Prepaid expenses and other current assets	4,316	4,760
Total current assets	562,801	319,446
Property and equipment, net	5,435	5,138
Operating lease right-of-use assets	1,756	—
Long-term investments	43,952	80,148
Restricted cash and other	2,109	2,521
Total assets	$ 616,053	$ 407,253
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	3,037	$ 2,946
Accrued liabilities	24,744	20,758
Prepayment from collaboration partner	2,256	12,973
Operating lease liabilities - current	1,831	—
Total current liabilities	31,868	36,677
Other long-term liabilities	—	9
Total liabilities	31,868	36,686
Commitments and contingencies (Note 7)		
Stockholders' equity		
Preferred stock, $0.0001 par value; 5,000,000 shares authorized; none issued and outstanding	—	—
Common stock, $0.0001 par value, 150,000,000 shares authorized at June 30, 2019 and December 31, 2018; 46,098,059 and 40,288,949 shares issued and outstanding at June 30, 2019 and December 31, 2018, respectively	5	4
Additional paid-in capital	861,880	573,183
Accumulated other comprehensive income (loss)	497	(67)
Accumulated deficit	(278,197)	(202,553)
Total stockholders' equity	584,185	370,567
Total liabilities and stockholders' equity	$ 616,053	$ 407,253

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

MYOKARDIA, INC.

Condensed Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share amounts)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Collaboration and license revenue	$ —	$ 6,639	$ —	$ 11,970
Operating expenses:				
Research and development	27,708	17,218	53,898	33,836
Selling, general and administrative	13,856	8,912	27,407	16,225
Total operating expenses	41,564	26,130	81,305	50,061
Loss from operations	(41,564)	(19,491)	(81,305)	(38,091)
Interest and other income, net	3,172	1,078	5,443	1,858
Loss before income taxes	(38,392)	(18,413)	(75,862)	(36,233)
Income tax benefit	(218)	—	(218)	—
Net loss	(38,174)	(18,413)	(75,644)	(36,233)
Other comprehensive income (loss), net of tax effect of $219, $0, $219, $0, respectively	201	70	564	(67)
Comprehensive loss	$ (37,973)	$ (18,343)	$ (75,080)	$ (36,300)
Net loss per share, basic and diluted	$ (0.83)	$ (0.49)	$ (1.75)	$ (0.99)
Weighted average number of shares used to compute net loss per share, basic and diluted	46,065,901	37,440,024	43,301,417	36,620,747

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

MYOKARDIA, INC.

Condensed Consolidated Statements of Stockholders' Equity
(In thousands, except share and per share amounts)
(Unaudited)

For the six months ended June 30, 2019

	Common Stock		Additional Paid-In	Accumulated other comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	income/ (loss)	Deficit	Equity
BALANCE—December 31, 2018	40,288,949	$ 4	$ 573,183	$ (67)	$ (202,553)	$ 370,567
Issuance of common stock in connection with the 2019 follow-on offering, net of issuance costs of $17,638	5,663,750	1	271,212	—	—	271,213
Issuance of common stock upon the exercise of options and release of stock awards	49,076	—	280	—	—	280
Vesting of early exercised stock options	—	—	8	—	—	8
Stock-based compensation	—	—	6,981	—	—	6,981
Unrealized gains, net of tax expense	—	—	—	363	—	363
Net loss	—	—	—	—	(37,470)	(37,470)
BALANCE—March 31, 2019	46,001,775	$ 5	$ 851,664	$ 296	$ (240,023)	$ 611,942
Issuance of common stock upon the exercise of options, release of stock awards and purchases under employee stock purchase plan	96,284	—	1,571	—	—	1,571
Vesting of early exercised stock options	—	—	7	—	—	7
Stock-based compensation	—	—	8,638	—	—	8,638
Unrealized gains, net of tax expense	—	—	—	201	—	201
Net loss	—	—	—	—	(38,174)	(38,174)
BALANCE—June 30, 2019	46,098,059	$ 5	$ 861,880	$ 497	$ (278,197)	$ 584,185

For the six months ended June 30, 2018

	Common Stock		Additional Paid-In	Accumulated other comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	income/ (loss)	Deficit	Equity
BALANCE—December 31, 2017	35,812,791	$ 4	$ 365,719	$ (192)	$ (134,855)	$ 230,676
Issuance of common stock upon the exercise of options	110,961	—	806	—	—	806
Repurchase of early exercised stock options	(770)	—	(1)	—	—	(1)
Vesting of early exercised stock options	—	—	18	—	—	18
Stock-based compensation	—	—	3,631	—	—	3,631
Unrealized losses, net of tax benefit	—	—	—	(137)	—	(137)
Net loss	—	—	—	—	(17,820)	(17,820)
BALANCE—March 31, 2018	35,922,982	$ 4	$ 370,173	$ (329)	$ (152,675)	$ 217,173
Issuance of common stock in connection with the 2018 follow-on offering, net of issuance costs of $12,233	3,961,147	—	181,863	—	—	181,863
Issuance of common stock upon the exercise of options and purchases under employee stock purchase plan	165,031	—	1,544	—	—	1,544
Vesting of early exercised stock options	—	—	14	—	—	14
Stock-based compensation	—	—	4,782	—	—	4,782
Unrealized gains, net of tax expense	—	—	—	70	—	70
Net loss	—	—	—	—	(18,413)	(18,413)
BALANCE—June 30, 2018	40,049,160	$ 4	$ 558,376	$ (259)	$ (171,088)	$ 387,033

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

MYOKARDIA, INC.

Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Six Months Ended June 30,	
	2019	**2018**
Cash flow from operating activities:		
Net loss	$ (75,644)	$ (36,233)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	15,619	8,413
Depreciation	944	723
Amortization of discount on investments	(656)	(53)
Income tax benefit of unrealized gains on short and long-term investments	(218)	—
Change in operating assets and liabilities:		
Receivable from collaboration partner	—	1,013
Prepaid expenses and other current assets	822	(728)
Operating lease right-of-use assets	1,279	—
Other long-term assets	125	(58)
Accounts payable	281	698
Accrued liabilities	4,428	1,388
Prepayment from collaboration partner	(10,717)	4,683
Other long-term liabilities	(1,390)	(88)
Deferred revenue	—	(11,970)
Net cash used in operating activities	(65,127)	(32,212)
Cash flow from investing activities:		
Purchases of investments	(41,593)	(39,595)
Sales of investments	4,000	—
Maturities of investments	29,000	12,000
Purchases of property and equipment	(1,693)	(2,356)
Net cash used in investing activities	(10,286)	(29,951)
Cash flow from financing activities:		
Proceeds from issuance of common stock in follow-on offerings, net of issuance and financing costs	271,224	182,069
Proceeds from exercise of stock options and employee stock purchase plan	1,837	2,350
Net cash provided by financing activities	273,061	184,419
Net increase in cash, cash equivalents and restricted cash	197,648	122,256
Cash, cash equivalents and restricted cash, beginning of period	248,265	224,857
Cash, cash equivalents and restricted cash, end of period	$ 445,913	$ 347,113
Non-cash investing and financing activities:		
Vesting of early exercised options and restricted stock	$ 15	$ 32
Unpaid financing-related costs	$ 11	$ 206
Unpaid portion of property and equipment purchases included in period-end accounts payable and accrued liabilities	$ 17	$ 386

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

1. Organization

MyoKardia, Inc. (the "Company") is a clinical-stage biopharmaceutical company pioneering a precision medicine approach to discover, develop and commercialize targeted therapies for the treatment of serious and neglected rare cardiovascular diseases. The Company's initial focus is on the treatment of heritable cardiomyopathies, a group of rare, genetically driven forms of heart failure that result from biomechanical defects in cardiac muscle contraction. MyoKardia's most advanced program, mavacamten, is in four clinical trials, including a pivotal Phase 3 study for the treatment of obstructive hypertrophic cardiomyopathy. A second clinical-stage candidate, MYK-491, is in a Phase 2a multiple-ascending dose study in patients with stable systolic heart failure. The Company was incorporated on June 8, 2012 in Delaware and its corporate headquarters and operations are in South San Francisco, California.

Liquidity

The Company has incurred significant operating losses since inception and has an accumulated deficit of $278.2 million as of June 30, 2019. The Company has relied on its ability to fund its operations through private and public equity financings, and to a lesser extent, through a license and collaboration arrangement with a collaboration partner, Sanofi S.A. ("Sanofi"), via its subsidiary, Aventis Inc. As discussed further in Note 3, the collaboration agreement with Sanofi ended on December 31, 2018 and the Company no longer records revenues from Sanofi nor has it received reimbursements of research and development expenses after June 30, 2019. The Company has not yet received regulatory approval to commercialize or sell any product and does not have customers. Management expects operating losses and negative operating cash flows to continue for the foreseeable future. As the Company continues to incur losses, a transition to profitability is dependent upon the successful development, approval, and commercialization of the Company's products and product candidates and the achievement of a level of revenues adequate to support its cost structure. The Company's ultimate success depends on the outcome of its research and development activities. The Company anticipates the need to raise additional capital to fully implement its business plan and intends to raise such capital through the issuance of additional equity, debt and/or strategic alliances with partner companies. There is no assurance that such financing will be available on terms acceptable to the Company, if at all.

On March 8, 2018, the Company filed a Registration Statement on Form S-3ASR (the "2018 Shelf Registration Statement") covering the potential offering, issuance, and sale of an indeterminate amount of common stock, preferred stock, debt securities, warrants and/or units. In March 2019, the Company completed a follow-on offering under the 2018 Shelf Registration Statement in which the Company issued 5,663,750 shares of common stock at a price of $51.00 per share, including 738,750 shares sold directly to the underwriters upon exercise of their option to purchase up to 738,750 shares of the Company's common stock within 30 days of the offering. During the six months ended June 30, 2019, the Company received proceeds totaling approximately $271.2 million from the offering, net of underwriting discounts and commissions and offering expenses.

As of June 30, 2019, the Company had $602.4 million of cash, cash equivalents and investments (short-term and long-term) and management believes that these amounts will be sufficient to meet the Company's anticipated operating and capital expenditure requirements for the twelve months following the issuance date of this Form 10-Q. Management's belief with respect to its ability to fund operations is based on estimates that are subject to risks and uncertainties. If actual results are different from management's estimates, the Company may need to seek additional funding.

2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited, include the Company's accounts and those of its wholly-owned subsidiary and have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP").

The condensed consolidated balance sheet at December 31, 2018, has been derived from the audited consolidated financial statements as of that date but does not include all of the information and footnotes required by GAAP for complete financial statements. The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for the full fiscal year or any interim period and should be read in conjunction with the audited financial statements for the year ended December 31, 2018 and the notes thereto, which are included in the Company's Annual Report on Form 10-K as of and for the year ended December 31, 2018. The significant accounting policies used in preparation of these condensed consolidated financial statements for the periods shown are consistent with those discussed in Note 2 to the consolidated financial statements in the Company's 2018 Annual Report on Form 10-K and are updated below as necessary.

The Company currently operates in one business segment, which is the identification, development and commercialization of therapies for the treatment of serious and neglected rare cardiovascular diseases and has a single reporting and operating unit. These interim statements, in the opinion of management, reflect all normal recurring adjustments necessary for the fair presentation of the Company's financial position and results of operations for the interim periods ended June 30, 2019 and 2018.

Accounting Policies

Leases

The Company determines if an arrangement is a lease at inception. Operating lease right-of-use (ROU) assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term beginning at the commencement date. As the Company's leases do not provide enough information to determine an implicit interest rate, the Company determines an incremental borrowing rate based on the information available as of the lease commencement date in determining the present value of future payments. The operating lease ROU assets also include any lease payments made and excludes lease incentives and initial direct costs incurred. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term.

Lease agreements that contain lease and non-lease components are accounted for as a single lease component.

Restricted Cash

A reconciliation of the Company's cash, cash equivalents and restricted cash in the condensed consolidated balance sheets that sum to the total of the same such amounts shown in the consolidated statements of cash flows is as follows (in thousands):

	June 30, 2019	December 31, 2018
Cash and cash equivalents	$ 443,693	$ 246,122
Restricted cash included in prepaid expenses and other current assets	$ 364	—
Restricted cash included in restricted cash and other	1,856	2,143
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	$ 445,913	$ 248,265

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, other comprehensive gain (loss) and the related disclosures. On an ongoing basis, management evaluates its estimates, including estimates related to accrued clinical trial and manufacturing development expenses, stock-based compensation expense, income tax expense and operating leases. Significant estimates in these condensed consolidated financial statements include estimates made in connection with accrued research and development expenses, stock-based compensation expense, leases, income tax expenses and revenue. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

Recently Adopted Accounting Pronouncements – Leases

Effective January 1, 2019, the Company adopted Accounting Standards Codification Topic 842, Leases (ASC 842), which requires lessees to recognize a ROU asset and a lease liability on the balance sheet for all leases except for short-term leases with a lease term of twelve months or less. For lessees, leases continue to be classified as either operating or finance leases in the income statement. Lessor accounting is similar to the prior model but updated to align with certain changes to the lessee model. Lessors continue to classify leases as operating, direct financing or sales-type leases. The Company elected to adopt ASC 842 under the transition method that allows for the application of the new guidance at the beginning of the adoption period without recasting comparative periods. The Company also elected transition practical expedients to the implementation of the lease standard, as follows: (1) the Company did not reassess whether any expired or existing contracts, which had commenced before January 1, 2019, the date of adoption, are or contain leases, (2) the Company did not reassess the lease classification for any expired or existing leases and (3) the Company did not reassess the initial direct costs for any existing leases.

Upon adoption, the Company recognized ROU assets and related lease liabilities totaling $2.1 million, representing the present value of future lease payments of each lease utilizing the Company's incremental borrowing rate ("IBR"), which is the estimated borrowing rate of a collateralized loan over the remaining term of the lease. Also upon adoption, a deferred rent amount of $0.2 million as of December 31, 2018 was reclassified to the ROU assets, reducing the carrying value to $1.9 million. The increase in ROU assets and related lease liabilities since adoption of ASC 842 during the first quarter of 2019 resulted from the Company entering into an additional facility operating lease in South San Francisco.

Recently Adopted Accounting Pronouncements - Other

In June 2018, the FASB issued ASU No. 2018-07 (Topic 718), *Compensation – Stock Compensation (ASU 2018-07)*. The update represents an expansion of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. An entity should apply the requirements of Topic 718 to nonemployee awards except for specific guidance on inputs to an option pricing model and the attribution of cost (that is, the period of time over which share-based payment awards vest and the pattern of cost recognition over that period). The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The amendments also clarify that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under Topic 606, Revenue from Contracts with Customers. The Company adopted ASU 2018-17 in the first quarter of 2019 and it did not have a material impact to the Company's financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

In August 2018, the FASB issued ASU 2018-13 (Topic 820), *Fair Value Measurement (ASU 2018-13)*, which modifies the disclosure requirements in Topic 820 by removing requirements for disclosing (i) amounts of and reasons for transfers between the Level 1 and Level 2 hierarchies, (ii) the policy for timing of transfers between levels and (iii) the valuation processes for Level 3 fair value measurements. The ASU 2018-13 amendment also adds requirements for disclosure of changes in unrealized gains and losses for the period relating to Level 3 fair value measurements and other factors considered in the valuation of Level 3 investments. This amendment is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company has evaluated this amendment and it is not expected to have a material impact to the Company's financial statements.

In June 2016, the FASB issued ASU No. 2016-13 (Topic 326), *Financial Instruments –Measurement of Credit Losses on Financial Instruments (ASU 2016-13),* which requires measurement and recognition of expected credit losses for financial assets by requiring an allowance to be recorded as an offset to the amortized cost of such assets. For available-for-sale debt securities, expected credit losses should be estimated when the fair value of the debt securities is below their associated amortized costs. This amendment is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The modified retrospective approach should be applied upon adoption of this new guidance. The Company has evaluated this amendment and it is not expected to have a material impact to the Company's financial statements.

3. Sanofi License and Collaboration Agreement

Sanofi (Aventis Inc.)

Agreement Overview, Termination and Royalties

In August 2014, the Company entered into an exclusive License and Collaboration Agreement ("Collaboration Agreement") with Aventis Inc., a wholly-owned subsidiary of Sanofi, for the research, development and potential commercialization of pharmaceutical products for the treatment, prevention and diagnosis of hypertrophic and dilated cardiomyopathy, as well as potential additional indications. During the period from August 2014 through December 2018, Sanofi paid the Company a total of $105.0 million in cash to perform research and development on the development of such products, as well as for granting to Sanofi certain royalty-bearing licenses. Of the $105.0 million, $0.7 million was attributed to a freestanding convertible preferred stock call option and $104.3 million was recognized as revenue during the period from August 2014 through December 31, 2018, the date on which the Company received a notice of termination of the Collaboration Agreement. In addition, in July 2019, the Company agreed to pay an aggregate of $80 million to Sanofi in consideration of Sanofi's release of the Company from its royalty payment obligations on net sales of HCM-1 products set forth in the Collaboration Agreement; see Note 12 "Subsequent Events". As a result, there are no further financial rights or obligations between the parties except for the final settlement of the Registration Program Plan (RPP); see "Cost Sharing" below.

The Collaboration Agreement provided for a termination clause whereby on or before December 31, 2018, Sanofi was required to notify the Company of its intent to continue the collaboration. The continuation would have committed Sanofi to specific research and development activities in support of the commercialization of the Company's products as well as resulted in a continuation of its obligation under the cost sharing portion of the collaboration to co-fund development as discussed further below. On December 31, 2018, Sanofi notified the Company it was terminating the Collaboration Agreement. Under the terms of the termination:

- Sanofi would reimburse the Company for certain research and development costs through June 30, 2019, after which such time such reimbursements were to be discontinued;
- the Company recovered global rights to all programs in its portfolio, including lead clinical-stage candidates, mavacamten and MYK-491; and
- Sanofi also would have remained eligible to receive royalties associated with any potential HCM-1 products that would have ranged from mid-single to low-double digits in the U.S. (there is no royalty obligation to Sanofi for sales outside the U.S.). However, as further discussed in Note 12, Subsequent Events, in July 2019 the Company was released from such royalty obligations upon its agreement to pay Sanofi an aggregate of $80 million, which resulted in the Company retaining exclusive worldwide rights to mavacamten and MYK-224.

The Company determined that Sanofi was a related party of the Company due to its previous collaborative relationship and that it was the Company's only partner. As of December 31, 2018, Sanofi was also a beneficial shareholder of the Company's common stock. In February 2019, Sanofi sold all of its holdings of the Company's common stock and no longer holds an equity interest in the Company.

History of the Collaboration Agreement

Under the Collaboration Agreement, the Company granted Sanofi royalty-bearing licenses to develop and commercialize products resulting from its lead candidate programs HCM-1, HCM-2 and DCM-1. The licenses provided Sanofi with worldwide rights in the case of DCM-1 and rights outside the United States with respect to the HCM-1 and HCM-2 programs. The terms of the Collaboration Agreement also stated that the Company was responsible for conducting research and development activities through early human efficacy studies for all three programs, except for specified research activities to be conducted by Sanofi.

Upon entering into this agreement, the Company received an up-front non-refundable cash payment of $35.0 million and Sanofi made an up-front equity purchase of $10.0 million (additional equity investments from Sanofi totaling $26.5 million were received subsequent to the effective date of the Collaboration Agreement). The Company was also eligible to receive additional payments and services, as follows:

- a one-time, non-refundable payment of $25.0 million contingent upon submission of an Investigational New Drug ("IND") application before certain regulatory authorities for its DCM-1 program;
- a non-refundable continuation payment of $45.0 million contingent upon Sanofi's notification of its decision to continue the agreement beyond December 31, 2016;
- up to $15.0 million in research and development funding for the lead compound in each program if studies leading to proof-of-concept ("POC") were extended beyond December 31, 2018; and
- up to $45.0 million in funding from Sanofi of approved in-kind research and clinical activities.

During the fourth quarter of 2016, the Company submitted an IND application to the U.S. Food and Drug Administration and as a result, the Company received the $25.0 million milestone payment from Sanofi.

In December 2016, Sanofi provided notice to the Company of its election to continue the collaboration through December 31, 2018 pursuant to the terms of the Collaboration Agreement. In connection with Sanofi's decision to continue the collaboration, the Company received the $45.0 million milestone payment in January 2017.

Under the terms of the agreement, the Company was also entitled to receive tiered royalties ranging from the mid-single digits to the mid-teens on net sales of certain HCM-1, HCM-2 and DCM-1 finished products outside the United States and on net sales of certain DCM-1 finished products in the United States. In July 2019, the Company and Sanofi entered into a Termination Agreement to clarify or amend certain rights and obligations of the parties surviving the Collboration Agreement. As further discussed in Note 12, Subsequent Events, in July 2019 the Company reacquired its royalty rights from Sanofi for $80 million, which resulted in the Company retaining exclusive worldwide rights to mavacamten and MYK-224. As a result of the repurchase of these rights, there are no further financial rights or obligations between the Company and Sanofi except for the final settlement of the RPP reimbursement arrangement.

Revenue Recognition

The Company evaluated the Collaboration Agreement and determined that it had the following promises:

1. the licenses of Company intellectual property to Sanofi for each of the HCM-1, HCM-2 and DCM-1 programs, and
2. the performance of research and development services, including regulatory support, for each of the three programs.

The Company considered whether the licenses had standalone functionality and were capable of being distinct; however, given the fact that the research and development services were of such a specialized nature that could only be performed by the Company and Sanofi could not benefit from the intellectual property licenses without the Company's performance, the Company determined that the intellectual property licenses were not distinct from the research and development services and thus the license and research and development services were combined as a single performance obligation for each of the three programs. The Company also determined that performance under each of the three programs is a separate performance obligation.

Contract Term

For revenue recognition purposes, the Company determined that the Collaboration Agreement was a period to period contract for which the Company had enforceable rights and obligations from inception through the initial term of December 31, 2016. Sanofi had the right to terminate the Collaboration Agreement prior to December 31, 2016 or to extend the contract term through December 31, 2018. If Sanofi had elected to terminate the agreement, the termination would have taken effect on December 31, 2016 and all licensed rights would have reverted to the Company. The Company did not have any obligation to reimburse Sanofi any portion of the payments received if Sanofi had terminated the agreement.

In December 2016, Sanofi elected to continue the Collaboration Agreement through an extended term ending December 31, 2018 and made the $45.0 million continuation payment to the Company in January 2017. The Company determined that the extended term was to be treated as a separate contract because such an extension was not probable at the inception of the contract, the extension represented additional goods and services, and such activities were priced commensurate to the effort required and do not involve any significant discount. It was also concluded that the extended term provided the Company with enforceable rights and obligations for the two-year period ended December 31, 2018.

Because Sanofi retained the option in the Collaboration Agreement to extend the arrangement, for purposes of revenue recognition neither party was committed to perform and the contract did not have enforceable rights and obligations which impacted revenue recognition beyond December 31, 2018.

Transaction Price

The Company's assessment of the transaction price included an analysis of amounts to which it was expected to be entitled for providing goods or services to the customer which at contract inception consisted of the upfront cash payment, valued at $34.3 million, net of the fair value of $0.7 million allocated to the option provided to Sanofi to acquire equity, and variable consideration of $25.0 million, subject to an IND application. Sanofi paid the Company the $25.0 million milestone payment upon the Company's application for the IND. In 2016, after the IND application was made and when the Company determined it was deemed probable that significant reversal in the amount of cumulative revenue recognized will not occur, the Company included this amount in the transaction price. As of December 31, 2016, all performance obligations associated with the initial term were satisfied.

The extended term (from January 1, 2017 to December 31, 2018) had a fixed fee of $45.0 million, paid by Sanofi contemporaneously with the notice of continuation of the contract. The Company therefore determined that the transaction price for this extended term was $45.0 million.

As previously noted above, the Collaboration Agreement also included up to $45.0 million in funding from Sanofi of approved in-kind research and clinical activities. Sanofi was the decision maker on how to provide these services and such services were used in the development of joint program technology which is co-owned by both parties. As such the Company concluded that these in-kind contributions did not constitute consideration paid by Sanofi to the Company.

Any consideration related to sales-based royalties was to be recognized when the related sales occurred and therefore was also excluded from the transaction price.

Methodology for Recognition

Since the Company determined that the three performance obligations were satisfied over time, the Company selected a single revenue recognition method that it believed most faithfully depicted the Company's performance in transferring control of the services. GAAP allows entities to choose between two methods to measure progress toward complete satisfaction of a performance obligation:

1. Output methods - recognize revenue on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract (e.g. surveys of performance completed to date, appraisals of results achieved, milestones reached, time elapsed, and units produced, or units delivered); or

2. Input methods - recognize revenue on the basis of the entity's efforts or inputs to the satisfaction of a performance obligation (e.g., resources consumed, labor hours expended, costs incurred, or time elapsed) relative to the total expected inputs to the satisfaction of that performance obligation.

The Company utilized a cost-based input method to measure proportional performance and calculated the corresponding amount of revenue to recognize. The Company believed this was the best measure of progress because other measures did not reflect how the Company executed its performance obligations under the contract with Sanofi. In applying the cost-based input methods of revenue recognition, the Company used actual costs incurred relative to budgeted costs to fulfill the combined performance obligations. Revenue was recognized based on actual costs incurred as a percentage of total actual and budgeted costs as the Company completed its performance obligations, which were fulfilled on December 31, 2018. A cost-based input method of revenue recognition requires management to make estimates of costs to complete the Company's performance obligations. In making such estimates, significant judgment is required to evaluate assumptions related to cost estimates. The cumulative effect of revisions to estimated costs to complete the Company's performance obligations were recorded in the period in which changes were identified and amounts could be reasonably estimated.

For the six months ended June 30, 2019 and 2018, the Company recognized zero and $12.0 million of collaboration and license revenue, respectively. The Company will not recognize any further revenue from the Collaboration Agreement.

There were no contract assets or liabilities as of June 30, 2019. The following table presents changes in the Company's contract liabilities, which excludes research and development reimbursements under the cost sharing plan further discussed below, for the six months ended June 30, 2018 (in thousands):

	Six Months Ended June 30, 2018			
	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
Contract liabilities:				
Deferred revenue	$ 33,558	$ —	$ (11,970)	$ 21,588

Cost Sharing

During the six months ended June 30, 2019 and 2018, the Company received research and development cost reimbursements from Sanofi under the terms of the Collaboration Agreement.

Since the inception of the Collaboration Agreement and up until the termination date:

(i) Sanofi had been conditionally responsible for reimbursing the Company for one half or more of the RPP costs after clinical proof-of-concept had been established for the lead compound under each of the HCM-1 and HCM-2 programs; and

(ii) if the Company had initiated a clinical trial of a compound under a proof-of-concept development plan and not terminated its development thereof and if another additional compound had been identified as a development candidate for the same program, the Company was entitled to full reimbursement of pre-proof-of-concept ("pre-POC") research and development costs on development candidates mutually identified as such additional compounds, with the objective of conducting IND-enabling studies and clinical trials on such candidate.

Effective October 2017 and until June 30, 2019, Sanofi shared RPP costs for the mavacamten program pursuant to the Collaboration Agreement termination terms. RPP costs approved by the Company and Sanofi included amounts incurred relating to clinical trials, development and manufacturing of, and obtaining regulatory approvals for mavacamten, and included direct employee costs and direct out-of-pocket costs incurred, by or on behalf of a party, specifically identifiable or reasonably and directly allocable to those activities.

Pursuant to the additional compounds provisions of the Collaboration Agreement, in August 2018 Sanofi agreed to reimburse the Company for eligible costs it has incurred in the development of the MYK-224 compound, which was identified as an additional compound under the HCM-1 program. Eligible costs were subject to review and approval under the same procedures as under the RPP program; reimbursable costs consisted of research and development activities agreed to by the Company and Sanofi that were negotiated and budgeted prior to the application for reimbursement. Reimbursements for this compound were received from Sanofi until June 30, 2019, in accordance with the Collaboration Agreement termination terms.

Estimated reimbursements were invoiced to Sanofi before each interim period based on budgeted amounts. For the RPP program, these estimates consisted of one half of the Company's mavacamten development budget in excess of Sanofi's mavacamten development budget each interim period. For the MYK-224 compound, these estimates consisted of the Company's entire research and development budget related to the compound for the forthcoming quarter. After each period end, a review of the actual expenses incurred was performed and any adjustments were carried forward to future invoices. Actual amounts received from Sanofi were applied to the applicable interim period to reduce the Company's research and development expenses.

Due to the termination of the license agreement effective December 31, 2018, the Company will not receive further reimbursements for the MYK-224 compound for any periods subsequent to April 1, 2019 and will not participate in the cost sharing arrangement for the mavacamten compound after June 30, 2019. As a result, there are no further financial rights or obligations between the Company and Sanofi whether for revenue recognition purposes or for research and development cost sharing except for the final settlement of the cost sharing arrangement, which is anticipated to be finalized in the third quarter of 2019.

The Company recorded $18.5 million and $7.1 million as reductions to research and development expenses for the six months ended June 30, 2019 and 2018, respectively.

The following table presents the Sanofi research and development reimbursement receivables and related prepayment activity during the six months ended June 30, 2019 and 2018 (in thousands):

	Six Months Ended June 30,	
	2019	2018
Receivable from collaboration partner		
Balance at beginning of period	$ —	$ 1,013
Deductions	—	(1,013)
Balance at end of period	$ —	$ —
Prepayment from collaboration partner for mavacamten		
Balance at beginning of period	$ 12,973	$ 4,432
Payments received from Sanofi	7,777	11,809
Actual expenses incurred	(18,494)	(7,126)
Balance at end of period	$ 2,256	$ 9,115

4. Fair Value Measurements

Financial assets and liabilities are recorded at fair value. The accounting guidance for fair value provides a framework for measuring fair value, clarifies the definition of fair value and expands disclosures regarding fair value measurements. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The accounting guidance establishes a three-tiered hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value as follows:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2—Inputs other than quoted market prices included in Level 1 are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

Level 3—Inputs reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

The following table sets forth the Company's financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy (in thousands):

	Fair Value Measurements at June 30, 2019			
	Total	Level 1	Level 2	Level 3
Assets				
Money market funds	$ 443,632	$ 443,632	$ —	$ —
U.S. government agency obligations	98,622	—	98,622	—
Corporate securities	60,122	—	60,122	—
Total	$ 602,376	$ 443,632	$ 158,744	$ —

	Fair Value Measurements at December 31, 2018			
	Total	Level 1	Level 2	Level 3
Assets				
Money market funds	$ 245,194	$ 245,194	$ —	$ —
U.S. government agency obligations	85,033	—	85,033	—
Corporate securities	63,679	—	63,679	—
Total	$ 393,906	$ 245,194	$ 148,712	$ —

The following table is a summary of amortized cost, unrealized gain and loss, and fair value of the Company's marketable securities by contractual maturities (in thousands):

	Fair Value Measurements at June 30, 2019			
	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
Cash equivalents (due within 90 days)	$ 443,632	$ —	$ —	$ 443,632
Short-term investments (due within one year)	114,486	306	—	114,792
Long-term investments (due between one and two years)	43,537	415	—	43,952
Total	$ 601,655	$ 721	$ —	$ 602,376

	Fair Value Measurements at December 31, 2018			
	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
Cash equivalents (due within 90 days)	$ 245,194	$ —	$ —	$ 245,194
Short-term investments (due within one year)	68,656	—	(92)	68,564
Long-term investments (due between one and two years)	80,118	98	(68)	80,148
Total	$ 393,968	$ 98	$ (160)	$ 393,906

5. Leases

As of June 30, 2019, the Company has operating leases recorded on its balance sheet for approximately 70,500 square feet of office and lab space in three separate facilities in South San Francisco, California (the "Existing Facilities"). All of the lease agreements associated with the Existing Facilities expire on or before April 2020 and there are no options to extend the leases. The Company does not plan to cancel the existing lease agreements for its Existing Facilities prior to their respective expiration dates. The Company does not have any leases that would be classified as finance leases.

Information related to operating leases as of June 30, 2019 and upon adoption of ASC 842 on January 1, 2019 is as follows (in thousands, except for percentages and years).

	June 30, 2019	January 1, 2019
Assets		
Operating lease right-of-use assets	$ 1,756	$ 1,940
Liabilities		
Operating lease liabilities - current	$ 1,831	$ 2,126
Operating lease liabilities - noncurrent	—	—
	$ 1,831	$ 2,126
Weighted average remaining lease term (years)	0.7	1.0
Weighted average discount rate	6%	6%

Information related to operating lease activity during the six months ended June 30, 2019 follows (in thousands):

	Six Months Ended June 30, 2019
Operating lease right-of-use assets obtained in exchange for lease obligations	$ 1,095
Operating lease rental expense	$ 1,415
Operating lease payments	$ 1,528

Future annual payments of operating lease liabilities as of June 30, 2019 are as follows (in thousands):

Year ending December 31:	Amount
2019 (six months remaining)	$ 1,478
2020	387
Total future lease payments	1,865
Less: imputed interest	(34)
Total operating lease liabilities	$ 1,831

In September 2018, the Company entered into a noncancelable operating lease (the "Lease") for approximately 129,800 square feet of space in Brisbane, California (the "New Facility"). The date on which the Company will record the ROU asset and lease liability on its balance sheet (the "Commencement Date"), as well as when it becomes responsible for paying rent under the Lease, will be the date the premises are ready for occupancy, currently anticipated to be January 2020. The Lease expires 10 years after the Commencement Date. The Lease grants the Company an option to extend the Lease for an additional 10-year period. Future minimum rental payments under the Lease during the 10-year term are $93.2 million in the aggregate. The Lease further provides that the Company is obligated to pay to the landlord certain costs, including taxes and operating expenses.

In September 2018, the Company provided a standby letter of credit of $1.9 million as security for its obligations under the Lease. This standby letter of credit, together with standby letters on Existing Facilities, are included on the balance sheet in prepaid expenses and other current assets and in restricted cash and other.

Future annual minimum operating lease payments due under the Lease for the New Facility are as follows (in thousands):

Year ending December 31:	Amount[1]
2019 (six months remaining)	$ —
2020	5,454
2021	8,461
2022	8,757
2023	9,063
Thereafter	61,444
Total	$ 93,179

(1) *The table above is prepared under the assumption that the Commencement Date at the New Facility will be January 1, 2020.*

Future annual minimum lease payments for operating leases as of December 31, 2018 were as follows (in thousands):

Year ending December 31:	Amount
2019	2,752
2020	5,831
2021	8,461
2022	8,757
2023	9,063
Thereafter	61,444
Total	96,308

The adoption of ASC 842 did not materially affect the amount or timing of operating lease rent expense to be recognized during the year ended December 31, 2019 as compared to accounting under the prior guidance. Operating lease rent expense, which is included in operating expenses on the Company's condensed consolidated statements of operations and comprehensive loss, was $0.7 million and $0.6 million for the three months ended June 30, 2019 and 2018, respectively, and $1.4 million and $1.0 million for the six months ended June 30, 2019 and 2018, respectively. The operating leases require the Company to share in prorated operating expenses and property taxes based upon actual amounts incurred; those amounts are not fixed for future periods and, therefore, are not included in the future commitments listed above.

6. Balance Sheet Components

Property and Equipment

Property and equipment consist of the following (in thousands):

	June 30, 2019	December 31, 2018
Scientific equipment	$ 9,944	$ 9,126
Furniture and equipment	1,471	1,248
Capitalized software	389	302
Leasehold improvements	564	451
Total	12,368	11,127
Less: Accumulated depreciation	(6,933)	(5,989)
Property and equipment, net	$ 5,435	$ 5,138

Depreciation expense was $0.4 million and $0.4 million for the three months ended June 30, 2019 and 2018, respectively, and $0.9 million and $0.7 million for the six months ended June 30, 2019 and 2018, respectively.

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	June 30, 2019	December 31, 2018
Clinical research and development	$ 16,568	$ 10,903
Payroll-related liabilities	6,919	8,151
Other	1,257	1,704
Total accrued liabilities	$ 24,744	$ 20,758

7. Commitments and Contingencies

Purchase Commitments

The Company conducts product research and development programs through a combination of internal and collaborative programs that include, among others, arrangements with universities, contract research organizations and clinical research sites. The Company has contractual arrangements with these organizations; however, these contracts are generally cancelable on 30 days' notice and the obligations under these contracts are largely based on services performed.

Contingencies

From time to time, the Company may have contingent liabilities that arise in the ordinary course of business activities. The Company accrues for such a liability when it is probable that future expenditures will be made, and such expenditures can be reasonably estimated. There were no contingent liabilities requiring accrual or disclosure as of June 30, 2019 or December 31, 2018.

Guarantees and Indemnifications

The Company enters into standard indemnification arrangements in the ordinary course of business. Pursuant to certain of these arrangements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified parties for losses suffered or incurred by the indemnified party, in connection with any trade secret, copyright, patent or other intellectual property infringement claim by any third-party with respect to the Company's technology. The term of these indemnification arrangements is generally perpetual. The maximum potential amount of future payments the Company could be required to make under these agreements is not determinable because it involves claims that may be made against the Company in the future but have not yet been made.

The Company indemnifies its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity, as permitted under Delaware law and in accordance with its certificate of incorporation and bylaws, and agreements providing for indemnification entered into with its officers and directors. The term of the indemnification period lasts as long as an officer or director may be subject to any proceeding arising out of acts or omissions of such officer or director in such capacity.

The maximum amount of potential future indemnification of directors and officers is unlimited; however, the Company currently holds director and officer liability insurance. This insurance allows the transfer of risk associated with its exposure and may enable it to recover a portion of any future amounts paid.

The Company believes that the fair value of these indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to these obligations for any period presented.

8. Stockholders' Equity

On March 8, 2018, the Company filed the 2018 Shelf Registration Statement covering the potential offering, issuance, and sale of an indeterminate amount of common stock, preferred stock, debt securities, warrants and/or units. In March 2019, the Company completed a follow-on offering under the 2018 Shelf Registration Statement pursuant to which the Company issued 5,663,750 shares of common stock at a price of $51.00 per share, which included 738,750 shares sold directly to the underwriters upon exercise of their over-allotment option. During the six months ended June 30, 2019, the Company received proceeds totaling approximately $271.2 million from the offering, net of underwriting discounts and commissions and offering expenses.

Common Stock Reserved for Issuance

The Company has reserved shares of common stock for issuance as follows:

	June 30, 2019	December 31, 2018
Options and awards issued and outstanding	5,303,268	3,864,407
Shares available for issuance under 2015 Stock Option and Incentive Plan	956,329	904,785
Shares available for issuance under 2015 Employee Stock Purchase Plan	1,162,647	780,716
Total	7,422,244	5,549,908

9. Stock-Based Compensation

The Company classifies stock-based compensation expense in the accompanying condensed consolidated statements of operations and comprehensive loss based on the department to which a recipient belongs. The following table sets forth stock-based compensation expense related to equity awards granted to employees and consultants for all periods presented (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Research and development	$ 3,795	$ 2,050	$ 6,758	$ 3,641
Selling, general and administrative	4,843	2,732	8,861	4,772
Total	$ 8,638	$ 4,782	$ 15,619	$ 8,413

The following summarizes option and other equity award activity under the 2012 Equity Incentive Plan and 2015 Stock Option and Incentive Plan:

	Shares Subject to Outstanding Options	Weighted Average Exercise Price per Share
Balance at December 31, 2018	3,701,461	$ 26.40
Options granted	1,179,253	41.34
Options exercised	(88,629)	11.23
Options canceled/forfeited	(71,235)	32.24
Balance at June 30, 2019	4,720,850	30.33

	Shares Subject to Outstanding Awards	Weighted Average Grant Date Fair Value
Balance at December 31, 2018	162,946	$ 53.37
RSUs awarded	460,149	41.54
RSUs released	(32,523)	52.06
RSUs forfeited	(8,154)	47.25
Balance at June 30, 2019	582,418	44.19

Restricted stock units ("RSUs") settle into shares of common stock upon vesting and the fair value is the market price on the date of grant.

Pursuant to the terms of the Company's 2015 Employee Stock Purchase Plan (the "2015 ESPP"), on April 30, 2019, the Company issued 20,958 shares to participants in the 2015 ESPP in exchange for their contributions during the period from November 1, 2018 to April 30, 2019.

In relation to stock options and awards that vest upon the achievement of performance criteria, there was $0 and $40,000 in stock-based compensation expense recorded for the three months ended June 30, 2019 and 2018, respectively, and $0 and $193,000 was recorded for the six months ended June 30, 2019 and 2018, respectively. The Company begins to recognize expenses related to these stock options and awards during the period upon concluding that certain performance criteria are considered probable.

10. Net Loss per Share

The following table sets forth the computation of basic and diluted net loss per share attributable to common stockholders (in thousands, except share and per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Numerator				
Net loss	$ (38,174)	$ (18,413)	$ (75,644)	$ (36,233)
Denominator				
Weighted average shares outstanding	46,067,571	37,490,960	43,305,587	36,694,820
Less: weighted average shares subject to repurchase	(1,670)	(50,936)	(4,170)	(74,073)
Weighted average shares used to compute basic and diluted net loss per share	46,065,901	37,440,024	43,301,417	36,620,747
Net loss per share, basic and diluted	$ (0.83)	$ (0.49)	$ (1.75)	$ (0.99)

The following outstanding shares of potentially dilutive securities were excluded from the computation of diluted net loss per share attributable to common stockholders for the periods presented because including them would have been antidilutive:

	As of June 30,	
	2019	2018
Common stock subject to repurchase	—	32,361
Options and awards issued and outstanding	5,303,268	3,904,668

As of June 30, 2019, the Company has contributions from plan participants of $0.3 million under the 2015 ESPP, which if converted, would be equivalent to approximately 8,000 shares based on 85% of the stock price at the beginning of the offering period. As of June 30, 2018, the Company had contributions from plan participants of $0.2 million under the 2015 ESPP, which if converted, would have been equivalent to approximately 5,000 shares based on 85% of the stock price at the beginning of the offering period.

11. Income taxes

Deferred tax assets and deferred tax liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company does not recognize a tax benefit for uncertain tax positions unless it is more likely than not that the position will be sustained upon examination by tax authorities, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The tax benefit potentially recorded for these positions is measured at the largest amount of cumulative benefit that has greater than a 50 percent likelihood of being realized upon ultimate settlement. Deferred tax assets that do not meet these recognition criteria are not recorded and the Company recognizes a liability for uncertain tax positions that may result in tax payments. If such unrecognized tax benefits were realized and not subject to valuation allowances, the entire amount would impact the tax provision. As of June 30, 2019, the Company's uncertain tax positions were subject to valuation allowances and the Company has not recorded provisions for income taxes for the three months and six months ended June 30, 2019 and 2018, respectively.

The Company recognized a benefit from income taxes of $218,000 for the three and six months ended June 30, 2019 and $0 for the three and six months ended June 30, 2018. The income tax benefit is primarily related to the net unrealized gain on the Company's short term and long-term investments, resulting in an increase in deferred tax liabilities and a decrease in the valuation allowance.

12. Subsequent Events

On July 18, 2019, the Company announced an agreement with Sanofi to reacquire the U.S. royalty rights to mavacamten and MYK-224 for $80 million, of which $50 million was paid immediately and $30 million was transferred to escrow to be paid by June 30, 2020. The agreement also required the Company to pay $4.3 million to Sanofi for certain of its assets related to the MYK-491 program. All amounts were paid in July 2019. Neither the Company nor Sanofi have further obligations under the agreement that would prevent the payment of the escrowed amount. As a result of the agreement, there are no further financial rights or obligations between the Company and Sanofi except for the final settlement of the cost sharing arrangement described in Note 3, which will occur in the third quarter of 2019.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operation

You should read the following management's discussion and analysis of our financial condition and results of operations in conjunction with our unaudited condensed consolidated financial statements and notes thereto included in Part I, Item 1 of this Quarterly Report on Form 10-Q and with our audited consolidated financial statements and notes thereto for the year ended December 31, 2018, included in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the U.S. Securities and Exchange Commission (SEC) on February 28, 2019 (the "Annual Report").

Special note regarding forward-looking statements

This report contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed in these forward-looking statements. The statements contained in this report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements are often identified by the use of words such as, but not limited to, "anticipate," "believe," "can," "continue," "could," "estimate," "expect," "intend," "may," "plan," "project," "seek," "should," "strategy," "target," "will," "would" and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included under Part II, Item 1A below. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We are a clinical-stage biopharmaceutical company pioneering a precision medicine approach to discover, develop and commercialize targeted therapies for the treatment of serious cardiovascular diseases. Our goal is to be the world's leading precision cardiovascular medicine company. Precision medicine involves discovering and developing therapies that integrate clinical and molecular information based on the biological basis of disease. Our strategy is to identify homogenous subgroups of patients with a given cardiovascular disease, understand the causal factors underlying that subgroup's condition, and develop targeted therapies designed to correct the common underlying defect leading to abnormal cardiac contraction or relaxation within each subgroup.

Mavacamten is initially being developed for the treatment of symptomatic obstructive HCM, or oHCM. In a Phase 2 clinical trial, known as PIONEER-HCM, mavacamten achieved statistically significant changes in the primary endpoint of post-exercise left ventricular outflow tract, or LVOT, gradient from baseline and demonstrated improvements across key secondary endpoints including New York Heart Association, or NYHA, functional classification, exercise capacity as measured by peak oxygen consumption, or peak VO2, and change in dyspnea scores. In 2018, we initiated four additional studies of mavacamten: a pivotal Phase 3 clinical study of oHCM patients known as EXPLORER-HCM; a Phase 2 clinical study, known as MAVERICK-HCM, in a second potential indication, symptomatic, non-obstructive, or nHCM; a long-term extension trial of oHCM patients from our Phase 2 PIONEER-HCM study; and a long-term extension study of patients completing our Phase 2 MAVERICK-HCM or Phase 3 EXPLORER-HCM trials, known as MAVA-LTE. We anticipate reporting data from our Phase 3 EXPLORER-HCM trial in the second quarter of 2020. Pending the outcome of that study, we plan to file a New Drug Application seeking regulatory approval of mavacamten for the treatment of symptomatic oHCM. In 2016, mavacamten was granted Orphan Drug Designation by the U.S. Food and Drug Administration, or the FDA, for the treatment of symptomatic oHCM. Data from the Phase 2 MAVERICK-HCM trial in nHCM is anticipated in the fourth quarter of 2019. We plan to report long-term safety and efficacy results from the PIONEER-OLE trial periodically.

Our second clinical-stage candidate, MYK-491, has completed two single-ascending dose Phase 1 studies, in healthy volunteers and in patients with stable heart failure. MYK-491 was shown to increase cardiac contractility by 5-20 percent across multiple echocardiographic parameters at higher dose concentrations, with minimal impact on diastolic function. MYK-491 is currently being studied in a Phase 2a multiple-ascending dose clinical trial in patients with stable heart failure. Additionally, we are advancing multiple preclinical programs, focused on regulating or normalizing cardiac muscle contractility and relaxation.

Financial Overview

We have not generated net income from operations and, as of June 30, 2019, had an accumulated deficit of $278.2 million, primarily as a result of research and development and selling, general and administrative expenses. Through December 31, 2018 our revenue was derived from non-refundable payments under the license and collaboration agreement we entered into with Aventis Inc., a wholly-owned subsidiary of Sanofi S.A. ("Sanofi"), in August 2014 (the "Collaboration Agreement"), and we have not yet generated any revenue from product sales. We have never been profitable and have incurred net losses in each year since our inception. We expect to incur significant and increasing losses from operations for the foreseeable future, and we can provide no assurance that we will ever generate significant revenue or profits.

Through June 30, 2019, we have financed our operations through an initial public offering ("IPO"), four follow-on public offerings, private placements of redeemable convertible preferred stock as well as funds received in connection with the Collaboration Agreement. Our equity issuances have been as follows:

- Prior to our IPO, we received net proceeds of $93.9 million from the sale of shares of our Series A, A-1 and B redeemable convertible preferred stock.
- In November 2015, we completed our IPO of 6,253,125 shares of common stock at an offering price of $10.00 per share, resulting in net proceeds of approximately $55.6 million, after deducting underwriting discounts, commissions and offering costs.
- In October 2016, we completed a follow-on public offering of 4,370,000 shares of common stock at an offering price of $15.00 per share, resulting in net proceeds of approximately $61.1 million, after deducting underwriting discounts, commissions and offering costs.
- In August 2017, we completed a follow-on public offering of 4,025,000 shares of common stock at an offering price of $35.50 per share, resulting in net proceeds of approximately $133.9 million, after deducting underwriting discounts, commissions and offering costs.
- In June 2018, we completed a follow-on public offering of 3,961,147 shares of common stock at an offering price of $49.00 per share, resulting in net proceeds of approximately $181.9 million, after deducting underwriting discounts, commissions and offering costs.
- In March 2019, we completed a follow-on public offering of 5,663,750 shares of common stock at an offering price of $51.00 per share, resulting in net proceeds of approximately $271.2 million, after deducting underwriting discounts, commissions and offering costs.

In connection with the Collaboration Agreement, we have received $156.2 million from Sanofi, consisting of a $35.0 million upfront payment, a $25.0 million milestone payment for the submission of an Investigational New Drug ("IND") application for MYK-491 with the FDA in November 2016, a $45.0 million continuation payment from Sanofi in January 2017 and $51.2 million in reimbursements and prepayments for research and development costs under the development portion of our Collaboration Agreement. As of June 30, 2019, we have an accumulated deficit of $278.2 million, cash and cash equivalents of $443.7 million, short-term investments of $114.8 million and long-term investments of $44.0 million.

We have no manufacturing facilities and all of our manufacturing activities are contracted out to third parties. We currently utilize third-party clinical research organizations ("CROs") to carry out our clinical development and trials. We do not yet have a sales organization.

Research and development expenses incurred in the development and potential commercialization of mavacamten, MYK-491 and other product candidates, are shown net of $8.6 million and $4.3 million in reductions in expense due to Sanofi research and development reimbursements during the three months ended June 30, 2019 and 2018, respectively, and $18.5 and $7.1 million during the six months ended June 30, 2019 and 2018, respectively, as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Mavacamten	$ 9,474	$ 6,878	$ 22,097	$ 14,818
MYK-491	4,817	2,859	9,646	5,679
Other	13,417	7,481	22,155	13,339
Total research and development expenses	$ 27,708	$ 17,218	$ 53,898	$ 33,836

We expect to incur substantial expenditures in the foreseeable future for the advancement of our precision medicine platform, the development and potential commercialization of our lead compounds mavacamten and MYK491, and the discovery, development and potential commercialization of any additional product candidates we may pursue. We will need substantial additional funding to support operating activities as we advance our lead compounds and other potential product candidates through clinical development, seek regulatory approval and proceed to commercialization. Adequate funding may not be available to us on acceptable terms, or at all.

Sanofi License and Collaboration Agreement

In August 2014, we entered into the Collaboration Agreement with Sanofi, for the research, development and potential commercialization of pharmaceutical products for the treatment, prevention and diagnosis of hypertrophic and dilated cardiomyopathy, as well as potential additional indications. Under the Collaboration Agreement, we granted Sanofi royalty-bearing licenses to develop and commercialize products resulting from our lead candidate programs HCM-1, HCM-2 and DCM-1. The licenses provided Sanofi with worldwide rights in the case of DCM-1 and rights outside the United States with respect to the HCM-1 and HCM-2 programs. The terms of the Collaboration Agreement also stated that we are responsible for conducting research and development activities through early human efficacy studies for all three programs, except for specified research activities to be conducted by Sanofi. We were also entitled to receive tiered royalties ranging from the mid-single digits to the mid-teens on net sales of certain HCM-1, HCM-2, and DCM-1 finished products outside the United States and on net sales of certain DCM-1 finished products in the United States. Sanofi was also eligible to receive tiered royalties ranging from the mid-single digits to the low-teens on net sales of certain HCM-1 and HCM-2 finished products in the United States.

Over the course of the collaboration, we received the following from Sanofi:

(i) $105.0 million in cash as upfront, milestone and continuation payments, in exchange for royalty-based license fees in the event of commercialization of these programs, certain of which rights continue post-termination;

(ii) $48.3 million in cash, in exchange for issuances of our common stock, net of offering costs and underwriting fees;

(iii) $51.2 million in cash, as reimbursement for certain research and development costs under the Registration Program Plan and pre-Proof of Concept terms of the agreement; and

(iv) $45.0 million of in-kind research and development support.

Under the terms of the Collaboration Agreement, the agreement was deemed terminated if Sanofi did not notify us that they intended to continue to fund certain programs on or before December 31, 2018. On that date, Sanofi notified us that they did not intend to continue the collaboration with respect to the HCM-1 program and that the agreement was deemed terminated with respect to all other programs. As a result, the agreement was terminated in its entirety except for Sanofi's continuing rights to royalties in the event of commercialization of the HCM-1 program. The events leading up to the termination included our belief and discussion with Sanofi that it is critical to our strategy to maintain control of the U.S. commercial rights for mavacamten, as well our desire not to grant additional rights in expanded indications. In addition, Sanofi's continuting rights to royalties in the event of commercialization of the HCM-1 program were terminated in July 2019 when we repurchased those rights for $80 million; Sanofi therefore has no continuing royalty rights to any of our products or programs.

Critical Accounting Policies and Significant Judgments and Estimates

This discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Our significant accounting policies are fully described in Note 2 of our Annual Report and are updated in our Form 10-Q as necessary. We believe that the accounting policies discussed in our Annual Report are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates. There have been no changes to our significant accounting policies during the six months ended June 30, 2019, except with respect to changes in our accounting for leases upon the adoption of Accounting Standards Codification Topic 842, *Leases* ("ASC 842").

Components of Operating Results

Collaboration and License Revenue

Up until its discontinuation and termination as of December 31, 2018, we generated revenue from the Collaboration Agreement with Sanofi for the development and commercialization of products under the collaboration.

Operating Expense

Research and Development Expenses

Research and development expenses consist of salaries and benefits, including stock-based compensation, lab supplies and facility costs, and fees paid to CROs to conduct certain research and development activities on our behalf. Amounts incurred in connection with the cost sharing and reimbursement portions of the collaboration and license agreements are also included in research and development expense and are shown net of such anticipated reimbursements. Payments made prior to the receipt of goods or services are capitalized until the goods or services are received.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist principally of salaries and benefits, including stock-based compensation, professional fees for legal, consulting, audit and tax services, market research, rent and other general operating expenses not otherwise classified as research and development expenses.

Interest and Other Income, Net

Interest and other income, net consists primarily of interest income earned on our cash and cash equivalents, short-term investments and long-term investments.

Results of Operations

Comparison of the Three Months Ended June 30, 2019 and 2018

The following table compares the operating results (in thousands):

	Three Months Ended June 30,		Change	
	2019	2018	$	%
Collaboration and license revenue	$ —	$ 6,639	$ (6,639)	-100%
Operating expenses:				
Research and development, net	27,708	17,218	10,490	61%
Selling, general and administrative	13,856	8,912	4,944	55%
Total operating expenses	41,564	26,130	15,434	59%
Loss from operations	(41,564)	(19,491)	(22,073)	113%
Interest and other income, net	3,172	1,078	2,094	194%
Income tax benefit	(218)	—	(218)	100%
Net loss	$ (38,174)	$ (18,413)	$ (19,761)	107%

Collaboration and License Revenue

Collaboration and license revenue decreased from $6.6 million for the three months ended June 30, 2018 to zero for the three months ended June 30, 2019. The prior year's revenue relates to the amounts recognized from the continuation payment of $45.0 million under the Collaboration Agreement, under which all revenues were recognized as of December 31, 2018.

Research and Development Expenses

Research and development expenses increased $10.5 million, or 61%, from $17.2 million for the three months ended June 30, 2018 to $27.7 million for the three months ended June 30, 2019. The increase in research and development expenses was primarily due to the following:

- a $5.6 million increase in clinical expenses related to our mavacamten and MYK-491 clinical trials;
- a $3.9 million increase in personnel expenses due to a higher employee headcount;
- a $2.9 million increase in contract research, chemistry and biology expenses on discovery and pre-clinical programs;
- a $1.7 million increase in stock compensation expense; and
- a $0.7 million increase in medical affairs, office, travel and other expenses,
- offset by a $4.3 million increase in research and development credits from Sanofi.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased $4.9 million, or 55%, from $8.9 million for the three months ended June 30, 2018 to $13.9 million for the three months ended June 30, 2019. The increase in selling, general and administrative expenses was primarily due to the following:

- a $2.1 million increase in stock compensation expense;
- a $1.1 million increase in personnel expenses due to a higher employee headcount;
- a $1.0 million increase in professional service and consulting fees;
- a $0.4 million increase in office and facilities-related expenses; and
- a $0.3 million increase in sales and marketing expenses.

Interest and Other Income, Net

Interest and other income increased $2.1 million, or 194%, from $1.1 million for the three months ended June 30, 2018 to $3.2 million for the thee months ended June 30, 2019. The increase in interest income was primarily due to interest earned on higher invested balances.

Income Tax Benefit

The income tax benefit was $218,000 for the three months ended June 30, 2019 versus $0 for the three months ended June 30, 2018. The amount primarily represents the tax effect of the unrealized gain on the Company's short term and long term investments, resulting in an increase in deferred tax liabilities and a decrease in the valuation allowance.

Comparison of the Six Months Ended June 30, 2019 and 2018

The following table compares the operating results (in thousands):

	Six Months Ended June 30,		Change	
	2019	2018	$	%
Collaboration and license revenue	$ —	$ 11,970	$ (11,970)	-100%
Operating expenses:				
Research and development, net	53,898	33,836	20,062	59%
Selling, general and administrative	27,407	16,225	11,182	69%
Total operating expenses	81,305	50,061	31,244	62%
Loss from operations	(81,305)	(38,091)	(43,214)	113%
Interest and other income, net	5,443	1,858	3,585	193%
Income tax benefit	(218)	—	(218)	100%
Net loss	$ (75,644)	$ (36,233)	$ (39,411)	109%

Collaboration and License Revenue

Collaboration and license revenue decreased from $12.0 million for the six months ended June 30, 2018 to zero for the six months ended June 30, 2019. The prior year's revenue relates to the amounts recognized from the continuation payment of $45.0 million under the Collaboration Agreement, under which all revenues were recognized as of December 31, 2018.

Research and Development Expenses

Research and development expenses increased $20.1 million, or 59%, from $33.8 million for the six months ended June 30, 2018 to $53.9 million for the six months ended June 30, 2019. The increase in research and development expenses was primarily due to the following:

- a $12.2 million increase in clinical expenses related to our mavacamten and MYK-491 clinical trials;
- a $7.6 million increase in personnel expenses due to a higher employee headcount;
- a $5.7 million increase in contract research, chemistry and biology expenses on discovery and pre-clinical programs;
- a $3.1 million increase in stock compensation expense;
- a $2.4 million increase in medical affairs, office, travel and other expenses, and

- a $0.5 million increase in contract manufacturing,
- offset by a $11.4 million increase in research and development credits from Sanofi.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased $11.2 million, or 69%, from $16.2 million for the six months ended June 30, 2018 to $27.4 million for the six months ended June 30, 2019. The increase in selling, general and administrative expenses was primarily due to the following:

- a $4.1 million increase in stock compensation expense;
- a $2.6 million increase in personnel expenses due to a higher employee headcount;
- a $2.5 million increase in professional service and consulting expenses;
- a $0.8 million increase in office and facilities-related expenses;
- a $0.7 million increase in sales and marketing expenses; and
- a $0.5 million increase in other miscellaneous expenses.

Interest and Other Income, Net

Interest and other income increased $3.6 million, or 193%, from $1.9 million for the six months ended June 30, 2018 to $5.4 million for the six months ended June 30, 2019. The increase in interest income was primarily due to interest earned on higher invested balances.

Income Tax Benefit

The income tax benefit was $218,000 for the three months ended June 30, 2019 compared to $0 for the three months ended June 30, 2018. The amount primarily represents the tax effect of the unrealized gain on the Company's short term and long term investments, resulting in an increase in deferred tax liabilities and a decrease in the valuation allowance.

Liquidity and Capital Resources

As of June 30, 2019, our principal source of liquidity was cash, cash equivalents and short- and long-term investments, which totaled $602.4 million. Since our inception in June 2012, we have funded our operations primarily through:

- Payments from our collaboration partner totaling $156.2 for research and development, and
- Proceeds, net of issuance costs, from private placements of convertible preferred stock and public offerings of common stock totalling $797.6 million.

On December 31, 2018, Sanofi notified us that it was terminating the Collaboration Agreement. All revenue related to the Collaboration Agreement has been recognized as of December 31, 2018 and after June 30, 2019 we will not receive reimbursements of research and development expenses under the cost sharing portion of the Collaboration Agreement.

We expect to incur substantial expenditures in the foreseeable future for the advancement of our precision medicine platform, the development and potential commercialization of mavacamten and MYK-491, and the discovery, development and potential commercialization of any additional product candidates we may pursue. Furthermore, if our clinical trials for mavacamten are successful, or our other product candidates, including MYK-491, enter into late-stage clinical trials or more advanced discovery and development stages, we may need to raise additional capital in order to further advance our product candidates towards regulatory approval.

We will continue to seek additional financing to develop our product candidates and fund operations for the foreseeable future through equity or debt financings, collaborative or other arrangements with corporate sources, or through other sources of financing. Adequate additional funding may not be available to us on acceptable terms or at all. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Any debt financing into which we enter may impose upon us additional covenants that restrict our operations, including limitations on our ability to incur liens or additional debt, pay dividends, repurchase our common stock, make certain investments and engage in certain merger, consolidation or asset sale transactions. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. If we are unable to raise additional funds when needed, we may be required to delay, reduce, or terminate some or all of our development programs and clinical trials. We may also be required to sell or license to other technologies, product candidates or programs that we would prefer to develop and commercialize ourselves.

Cash Flows

The following table sets forth the primary sources and uses of cash for each of the periods presented below (in thousands):

	Six Months Ended June 30,	
	2019	2018
Net cash (used in) provided by:		
Operating activities	$ (65,127)	$ (32,212)
Investing activities	(10,286)	(29,951)
Financing activities	273,061	184,419
Net increase in cash, cash equivalents and restricted cash	$ 197,648	$ 122,256

Cash Used in Operating Activities

Net cash used in operating activities for the six months ended June 30, 2019 was $65.1 million, and was primarily due to the net loss for the period of $75.6 million, adjusted for non-cash stock-based compensation expense of $15.6 million and depreciation of $0.9 million less a $0.7 million unrealized discount on investment income. Changes in working capital primarily consisted of a reduction in prepayments from our collaboration partner of $10.7 million, an increase in accrued liabilities of $4.4 million and a $1.3 million increase in operating lease right-of-use assets, offset by a decrease in other long-term liabilities of $1.4 million.

Net cash used in operating activities for the six months ended June 30, 2018 was $32.2 million, and was primarily due to the net loss for the period of $36.2 million, a decrease in deferred revenue of $12.0 million, and stock-based compensation expense of $8.4 million, and was also affected by changes in operating assets and liabilities, including an increase in prepayment from our collaboration partner of $4.7 million, an increase in accrued liabilities of $1.4 million and a reduction in receivable from our collaboration partner of $1.0 million.

Cash Used in Investing Activities

Cash used in investing activities for the six months ended June 30, 2019 consisted primarily of purchases of investments of $41.6 million and purchases of equipment of $1.7 million, offset by sales and maturities of investments of $4.0 million and $29.0 million, respectively.

Cash used in investing activities for the six months ended June 30, 2018 consisted primarily of purchases of investments of $39.6 million and investments in equipment of $2.4 million, offset by maturities of investments of $12.0 million.

Cash Provided by Financing Activities

Cash provided by financing activities for the six months ended June 30, 2019 consisted primarily of proceeds from the issuance of common stock in connection with a follow-on offering of $271.2 million, net of underwriting discounts, commissions and offering costs, as well as proceeds from the issuance of common stock in connection with purchases pursuant to the 2015 Employee Stock Purchase Plan and funds received as a result of common stock option exercises of $1.8 million.

Cash provided by financing activities for the six months ended June 30, 2018 consisted primarily of net proceeds from the issuance of common stock in connection with a follow-on offering of $182.1 million from the issuance of 3,961,147 shares of our common stock in a follow-on offering, net of underwriting discounts, commissions and offering costs, as well as proceeds from the issuance of common stock in connection with purchases pursuant to the 2015 ESPP and funds received as a result of common stock option exercises of $2.4 million.

Contractual Obligations and Other Commitments

There have been no material changes, other than that discussed below, outside the ordinary course of our business to our contractual obligations during the six months ended June 30, 2019, as compared to those disclosed in our Annual Report.

In September 2018, we entered into a noncancelable operating lease (the "Lease") for approximately 129,800 square feet of space in Brisbane, California (the "New Facility"). The date on which we will become responsible for paying rent under the Lease (the "Commencement Date") will be the date the premises are ready for occupancy, currently anticipated to be January 2020. The Lease expires 10 years after the Commencement Date. The Lease grants us an option to extend the Lease for an additional 10-year period. Future minimum rental payments under the Lease during the 10-year term are $93.2 million in the aggregate. The Lease further provides that we are obligated to pay to the landlord certain costs, including taxes and operating expenses. The Lease expires 10 years after the Commencement Date.

The following table summarizes our contractual obligations under the new and existing operating leases as of June 30, 2019 (in thousands):

	Payments due by period (1)				
	Less than 1 year (six months)	1 to 3 years	3 to 5 years	After 5 years	Total
Lease obligations, net	$ 1,478	$ 14,301	$ 17,821	$ 61,444	$ 95,044

(1) The table above is prepared under the assumption that the Commencement Date at the New Facility will be January 1, 2020.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

The market risk inherent in our financial instruments represents the potential loss arising from adverse changes in interest rates or exchange rates. As of June 30, 2019, we had cash, cash equivalents and investments (short-term and long-term) of $602.4 million, consisting of interest-bearing money market accounts and money market funds, which would be affected by changes in the general level of United States interest rates. However, due to the short-term maturities of our cash and cash equivalents and the low- risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair value of our cash, cash equivalents or investments.

In addition, we are also exposed to foreign currency exchange rate risk inherent in our contracts with research institutions and contract research organizations as certain services are performed by them outside the United States. We have payments due to one Australian vendor in foreign currency. A significant movement in the Australian dollar may have a material impact on our financial position in the future.

We do not believe that inflation, interest rate changes or exchange rate fluctuations had a significant impact on our results of operations for any periods presented.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act), refers to controls and procedures that are designed to provide reasonable assurance that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to provide reasonable assurance that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their control objectives.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2019, the end of the period covered by this Quarterly Report on Form 10-Q. Based upon such evaluation, our Chief Executive Officer and Principal Financial and Accounting Officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of such date.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

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

Item 1A. RISK FACTORS

You should consider carefully the following risk factors, together with all the other information in this report, including our consolidated financial statements and notes thereto, and in our other public filings with the SEC. The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects or cause our actual results to differ materially from those contained in forward-looking statements we have made in this report and those we may make from time to time. You should consider all of the risk factors described when evaluating our business.

Risks Related to Our Limited Operating History, Financial Condition and Capital Requirements

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

We are an early-stage company. We were incorporated and commenced operations in June 2012. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, developing our technology, creating and expanding on our precision medicine platform, identifying potential product candidates, undertaking preclinical studies for our programs, completing our ongoing clinical trials for our most advanced product candidate, mavacamten, planning further clinical development of mavacamten and completing our ongoing clinical development of our second product candidate, MYK-491. We have not yet demonstrated our ability to successfully complete the clinical development of a product candidate, including the completion of any clinical trials designed to support the registration of a product candidate, obtain marketing approvals, manufacture a commercial scale medicine, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Typically, it takes many years to develop a new medicine from the time it is discovered to when it is available for treating patients. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition from a company with a research and development focus to a company capable of supporting larger scale clinical development and commercial activities. If we are not successful in such a transition, our business, results and financial condition will be harmed.

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

Our initial product candidates, mavacamten and MYK-491, are in various stages of clinical testing and we must successfully complete our ongoing clinical trials of mavacamten and conduct significant additional clinical trials for MYK-491 before we can seek the regulatory approvals necessary to begin commercial sales of these or any other product candidates we may develop. We have incurred operating losses in each year since our inception due to costs incurred in connection with our research and development activities and selling, general and administrative costs associated with our operations. Our net loss for the six months ended June 30, 2019 was $75.6 million and as of June 30, 2019, we had an accumulated deficit of $278.2 million. We expect to incur increasing losses for several years as we continue our research activities and conduct development of, and seek regulatory approvals for, our initial product candidates, and commercialize any approved drugs. If our product candidates fail in clinical trials or do not gain regulatory approval, or if our product candidates do not achieve market acceptance, we will not be profitable. If we fail to become and remain profitable, or if we are unable to fund our continuing losses, you could lose all or part of your investment.

We have never generated any revenue from product sales and may never be profitable.

Our ability to generate revenue and achieve profitability depends on our ability, alone or with strategic collaborators, to successfully complete the development of, and obtain the regulatory approvals necessary to commercialize, our product candidates. We do not anticipate generating revenues from product sales for the foreseeable future, if ever. Our ability to generate future revenue from product sales depends heavily on our success in:

- completing research and preclinical and clinical development of our product candidates;
- seeking and obtaining regulatory approvals to market product candidates for which we complete clinical trials;

- developing a sustainable, scalable, reproducible and transferable manufacturing process for our product candidates;
- establishing and maintaining supply and manufacturing relationships with third parties that can provide adequate (in amount and quality) products and services to support clinical development and the market demand, if any, for our product candidates, if approved;
- launching and commercializing product candidates for which we obtain regulatory approval, either through a collaboration or, if launched independently, by establishing a sales force, marketing and distribution infrastructure;
- obtaining market acceptance of our product candidates and the use of precision medicine as a viable treatment option for cardiovascular diseases;
- addressing any competing technological and market developments;
- implementing additional internal systems and infrastructure, as needed;
- identifying and validating new product candidates from our platform;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how; and
- attracting, hiring and retaining qualified personnel who are suitable to our culture and mission.

Even if one or more of the product candidates that we are developing is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. Our expenses could increase beyond our expectations if we are required by the U.S. Food and Drug Administration (the "FDA"), the European Medicines Agency (the "EMA") or other regulatory agencies, domestic or foreign, to perform clinical trials and other studies in addition to those that we currently anticipate. Even if we are able to generate revenues from the sale of any approved products, we may not become profitable and may need to obtain additional funding to continue operations.

We will need to raise additional funding, which may not be available on acceptable terms, or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development efforts or other operations.

We are currently advancing mavacamten and MYK-491, our initial product candidates, through clinical development, and conducting preclinical discovery and development activities in our other programs. Drug development is expensive, and we expect our research and development expenses to increase substantially in connection with our ongoing activities, particularly as we continue to advance our product candidates in clinical trials and identify additional product candidates from our pipeline for clinical development.

As of June 30, 2019, our cash, cash equivalents and investments (short-term and long-term) totaled $602.4 million. We intend to use our cash, cash equivalents and investments to fund the advancement of our mavacamten clinical development program, including our ongoing Phase 3 clinical trial in symptomatic oHCM patients, our ongoing Phase 2 trial in symptomatic nHCM patients and our planned additional clinical trials of mavacamten, the progression of MYK-491 through clinical proof-of-concept, our ongoing preclinical, discovery and research programs and the expansion of our platform, as well as for working capital and general corporate purposes. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings, government or other third-party funding, marketing and distribution arrangements and other collaborations, strategic and licensing arrangements or a combination of these approaches. In any event, we will require additional capital to obtain regulatory approval for, and to commercialize, mavacamten, MYK-491 or any other product candidates we may identify and develop. Even if we believe we have sufficient funds for our current or future operating plans, we may seek additional capital if market conditions are favorable or if we have specific strategic considerations.

Our funding requirements and the timing of our need for additional capital are subject to change based on a number of factors, including:

- the rate of progress and the cost of our ongoing and planned clinical trials of mavacamten and MYK-491;
- the number of product candidates that we intend to develop using our precision medicine platform;
- the costs of research and preclinical studies to support the advancement of other product candidates into clinical development;
- the timing of, and costs involved in, seeking and obtaining approvals from the FDA and comparable foreign regulatory authorities, including the potential by the FDA or comparable regulatory authorities to require that we perform more studies than those that we currently expect;

- the costs of preparing to manufacture mavacamten on a commercial scale, and to manufacture MYK-491 for further clinical development;
- the costs of commercialization activities if mavacamten or any future product candidate is approved, including the formation of a sales force;
- the degree and rate of market acceptance of any products launched by us or our partners, if any;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- our need and ability to hire additional personnel;
- our ability to enter into and maintain collaboration, licensing, commercialization or other arrangements and the terms and timing of such arrangements; and
- the emergence of competing technologies or other adverse market developments.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity or convertible securities would dilute all of our stockholders. The incurrence of indebtedness would result in increased fixed payment obligations and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborative partners or otherwise at a different stage than otherwise would be desirable and we may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects.

If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay or discontinue one or more of our research or development programs or the commercialization of any product candidates or be unable to expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially and adversely affect our business, financial condition and results of operations.

Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the U.S.

We prepare our financial statements in conformity with accounting principles generally accepted in the U.S. These accounting principles are subject to interpretation by the Financial Accounting Standards Board ("FASB") and the Securities and Exchange Commission ("SEC"). A change in these policies or interpretations could have a significant effect on our reported financial results, may retroactively affect previously reported results, could cause unexpected financial reporting fluctuations, and may require us to make costly changes to our operational processes and accounting systems.

Risks Related to Our Precision Medicine Platform and the Discovery and Development of Our Product Candidates

The precision medicine approach we are taking to discover and develop drugs for serious diseases of systolic or diastolic dysfunction is novel and may never lead to marketable products.

We have concentrated our therapeutic product research and development efforts on the application of precision medicine to the treatment of heritable cardiovascular diseases, and our future success depends on the successful development of products based on our precision medicine platform and the continued development of this platform. We believe we are the first company to apply precision medicine to the treatment of cardiovascular disease, and neither we nor any other company has received regulatory approval to market therapeutics specifically targeting any form of heart failure or heritable cardiomyopathy. The scientific discoveries that form the basis for our efforts to discover and develop product candidates are novel, and the scientific evidence to support the feasibility of developing product candidates based on these discoveries is both preliminary and limited. If we do not successfully develop and commercialize product candidates based upon our technological approach, we will not become profitable and the value of our common stock may decline.

Further, our focus solely on precision medicine for the development of drugs for diseases of cardiac muscle contraction as opposed to multiple, more proven technologies for drug development increases the risks associated with the ownership of our common stock. If we are not successful in developing any product candidates using our precision medicine platform, we may be required to change the scope and direction of our product development activities. In that case, we may not be able to identify and implement successfully an alternative product development strategy, which would materially and adversely affect our business, financial condition and results of operations.

We depend heavily on the success of mavacamten and MYK-491, our initial product candidates. Other than mavacamten and MYK-491, all of our other programs are in discovery or preclinical development. Preclinical testing and clinical trials of our product candidates may not be successful. If we are unable to commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources in the identification of our initial product candidates, mavacamten for the treatment of hypertrophic cardiomyopathy ("HCM") and MYK-491 for the treatment of dilated cardiomyopathy ("DCM"). We are currently evaluating mavacamten and MYK-491 in clinical trials, and, if these product candidates fail to demonstrate safety or efficacy in their respective target indications to the satisfaction of the FDA or other comparable regulatory authorities, we will need to identify and rely on other product candidates or target indications, or both, for clinical development. All of our other programs are still in discovery or preclinical development. Our ability to generate revenue from product sales, which we do not expect will occur for years, if ever, will depend heavily on the successful development and eventual commercialization of mavacamten, MYK-491 or other product candidates that we may identify from our precision medicine platform.

The success of mavacamten, MYK-491 and any other product candidates that we discover and develop will depend on many factors, including the following:

- timely and successful initiation of, enrollment in, and completion of, clinical trials, including our Phase 2 and Phase 3 clinical trials of mavacamten in HCM, our Phase 2a clinical trial of MYK-491 in DCM and any additional clinical trials of these product candidates;
- achieving positive safety and efficacy data and desirable medicinal properties for our product candidates for the intended indications;
- our ability to receive, and the timing of our receipt of, any marketing approvals from applicable regulatory authorities;
- establishing and maintaining manufacturing capabilities or making arrangements with third-party manufacturers for the manufacture of our product candidates for clinical trials and, if approved, for commercialization;
- obtaining and maintaining patent and trade secret protection and non-patent exclusivity for our product candidates;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;
- a continued acceptable safety profile of our products following approval; and
- enforcing and defending intellectual property rights and claims.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

Preclinical and clinical drug development involves a lengthy and expensive process with an uncertain outcome, and observations and results from earlier studies and trials may not be applicable or predictive in future clinical trials.

Preclinical and clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the preclinical development or clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. For example, although our preclinical observations and data generated from our Phase 1 and Phase 2 clinical trials of mavacamten support our hypothesis that mavacamten has the potential to reduce cardiac muscle contractility and our belief that such data have demonstrated clinical proof of mechanism in both HCM patients and healthy volunteers, we have not completed placebo controlled clinical trials of mavacamten in larger populations using the current dosing strategy, inclusion/exclusion criteria, and endpoints of EXPLORER-HCM. In addition, our precision medicine platform is based on a translational medicine approach. Translational medicine, or the application of basic scientific findings to develop therapeutics that promote human health, is subject to a number of inherent risks. In particular, scientific hypotheses formed from preclinical or early clinical observations may prove to be incorrect, and the data generated in animal models or observed in limited patient populations may be of limited value, and may not be applicable in clinical trials conducted under the controlled conditions required by applicable regulatory requirements and our protocols. The initial clinical data from our Phase 1 and Phase 2 clinical trials of mavacamten, as well as our Phase 1 clinical trial of MYK-491, are preliminary in nature, and the clinical development of mavacamten and MYK-491 is not complete. Early positive data may not be repeated or observed in ongoing or future trials involving our product candidates. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. There is a high failure rate for drugs and biologics proceeding through clinical trials, particularly in the field of cardiovascular medicine. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies, and any such setbacks in our clinical development could have a material adverse effect on our business and operating results.

We may encounter substantial delays in our clinical trials or we may fail to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities.

Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must conduct extensive clinical trials to demonstrate the safety and efficacy of the product candidates in humans. Clinical testing is expensive, time-consuming and uncertain as to outcome. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. A failure of one or more clinical trials can occur at any stage of testing. We may experience delays in our ongoing clinical trials and we do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Additionally, although we believe that our precision medicine approach should eliminate the need for mavacamten to undergo the large outcomes-based studies that are often required for cardiovascular drugs as a condition to regulatory approval by the FDA or other regulatory authorities, regulatory authorities may nevertheless require us to conduct additional trials or generate additional data, including potential trials studying the interaction of our product candidates with other therapeutics commonly administered in the patient populations we are seeking to treat, which would increase the time and cost of our clinical development process. Furthermore, we will need to conduct larger clinical trials, and the FDA may subsequently require us to evaluate a larger number of patients than we presently anticipate, or to assess other endpoints besides those presently contemplated, in order to support regulatory approval.

Clinical trials can be delayed for a variety of reasons, including:

- delays in reaching a consensus with regulatory agencies on trial design;
- delays in reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;
- delays in obtaining required Institutional Review Board ("IRB") approval at each clinical trial site;
- delays in recruiting suitable patients to participate in our clinical trials;
- imposition of a clinical hold by regulatory agencies, including after an inspection of our clinical trial operations or trial sites;
- failure by our CROs, other third parties or us to adhere to clinical trial requirements;
- failure by us, our CROs or other third-party contractors to perform clinical trials in accordance with the FDA's good clinical practice ("GCP") requirements or applicable regulatory guidelines in other countries;
- delays in the testing, validation, manufacturing and delivery of our product candidates to the clinical sites;
- delays in having patients complete participation in a study or return for post-treatment follow-up;
- clinical trial sites deviating from a trial protocol or dropping out of a trial;
- clinical trial subjects failing to comply with the trial regimen or dropping out of a trial;
- adding new clinical trial sites;
- failure to manufacture or supply sufficient quantities of product candidates for use in clinical trials;
- occurrence of serious adverse events associated with the product candidate that are viewed to outweigh its potential benefits; or
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, or suspension or termination is recommended by the Data Safety Monitoring Board for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA or other regulatory authorities. The FDA or other regulatory authorities may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the study. The FDA or other regulatory authorities may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA or other regulatory authorities, as the case may be, and may ultimately lead to the denial of marketing approval of one or more of our product candidates.

Any inability to successfully complete preclinical and clinical development could result in additional costs to us or impair our ability to generate revenues from product sales, and, if applicable under any collaboration or similar agreement, regulatory and commercialization milestones and royalties. In addition, if we make manufacturing or formulation changes to our product candidates, we may need to conduct additional studies to bridge our modified product candidates to earlier versions. Clinical trial delays could also shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business and results of operations. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

If the results of our clinical trials are inconclusive or if there are safety concerns or adverse events associated with our product candidates, we may:

- be delayed in obtaining marketing approval for our product candidates, if at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant restrictions on use or distribution of the drug;
- require safety warnings in the label and/or require risk management plan post-approval;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw their approval of the product or impose restrictions on its distribution in the form of a modified risk evaluation and mitigation strategy ("REMS");
- be subject to the addition of labeling statements, such as warnings or contraindications;
- be sued; or
- experience damage to our reputation.

We may find it difficult to enroll patients in our clinical trials, which could delay or prevent clinical trials of our product candidates.

Identifying and qualifying patients to participate in clinical trials of our product candidates is critical to our success. The timing to commence and complete our clinical trials depends on the speed at which we can recruit patients to participate in testing our product candidates. If patients are unwilling to participate in our clinical trials because of a lack of familiarity with our approach to the treatment of cardiovascular diseases, negative publicity from adverse events in biotechnology or the fields of precision medicine or cardiovascular disease or for other reasons, including competitive clinical trials for similar patient populations, our timelines for recruiting patients, conducting clinical trials and obtaining regulatory approval of potential products may be delayed. These delays could result in increased costs, delays in advancing our product development, delays in testing the effectiveness of our product candidates or termination of our clinical trials altogether.

We may not be able to identify, recruit and enroll a sufficient number of patients, or those with required or desired characteristics to achieve diversity in a study, to complete our clinical trials in a timely manner. Patient enrollment is affected by factors including:

- severity of the disease under investigation;
- design of the clinical trial protocol;
- size and nature of the patient population;
- eligibility criteria for the clinical trial in question;

- perceived risks and benefits of the product candidate under study in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating;
- proximity and availability of clinical trial sites for prospective patients;
- availability of competing therapies and clinical trials;
- efforts to facilitate timely enrollment in clinical trials;
- patient referral practices of physicians; and
- ability to monitor patients adequately during and after treatment.

In particular, each of the conditions in which we are evaluating or plan to evaluate our product candidates are rare genetic disorders or involve segmented patient populations with limited patient pools from which to draw for clinical trials. To date, the HCM and DCM patient populations have not been extensively evaluated in clinical trials. As a result, enrollment in our ongoing and planned clinical trials is difficult to predict and may take longer or cost more than we anticipate.

We plan to seek initial marketing approval in the United States. We may not be able to initiate or continue clinical trials if we cannot enroll a sufficient number of eligible patients to participate in the clinical trials required by the FDA or other regulatory agencies. Our ability to successfully initiate, enroll and complete a clinical trial in any foreign country is subject to numerous risks unique to conducting business in foreign countries, including:

- difficulty in establishing or managing relationships with CROs and physicians;
- different standards for the conduct of clinical trials;
- our inability to locate qualified local consultants, physicians and partners; and
- the potential burden of complying with a variety of foreign laws, medical standards and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatment.

If we have difficulty enrolling a sufficient number of patients to conduct our clinical trials as planned, we may need to delay, limit or terminate ongoing or planned clinical trials, any of which would have an adverse effect on our business.

We may not be successful in our efforts to identify or discover potential product candidates.

The success of our business depends primarily upon our ability to identify, develop and commercialize therapeutics for the treatment of genetic cardiovascular diseases based on our precision medicine approach. A key element of our strategy is to use our precision medicine platform to identify and study compounds that can be used to correct or offset the abnormal contraction caused by HCM and DCM. Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying appropriate biomarkers or potential product candidates;
- our initial hypotheses based on our preclinical or early clinical observations may not be supported by later clinical results;
- potential product candidates may, on further study, be shown to have harmful side effects or may have other characteristics that may make the products unmarketable or unlikely to receive marketing approval; or
- research programs to identify new product candidates require substantial technical, financial and human resources. We may choose to focus our efforts and resources on a potential product candidate that ultimately proves to be unsuccessful.

If we are unable to identify suitable compounds for preclinical and clinical development, we may be forced to abandon our development efforts for a research program or programs and we will not be able to obtain product revenues in future periods, which likely would result in significant harm to our financial position and adversely impact our stock price.

Any of our product candidates may cause adverse effects or have other properties that could delay or prevent their regulatory approval, limit the scope of any approved label or market acceptance or result in other significant negative consequences following marketing approval, if any.

Adverse events or other unintended side effects or safety signals caused by our product candidates could cause us, IRBs or ethics committees, clinical trial sites or regulatory authorities to interrupt, delay or halt clinical trials and could result in the denial of regulatory approval. For example, through additional studies, we may determine that although mavacamten has been shown to be specific to striated muscle, which includes both skeletal and cardiac muscle, and selective for cardiac muscle, it may target myosin in skeletal muscle, which could result in unintended adverse effects. We have observed adverse events in our clinical trials of mavacamten. Results of our ongoing and planned trials could reveal a high and unacceptable severity and prevalence of these or other adverse events in subjects treated with our product candidates. Additionally, if the adverse events we have observed are deemed to be unacceptable or other unacceptable side effects or safety signals are observed in any ongoing or subsequent preclinical studies or clinical trials of our product candidates, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. Any adverse effects encountered in our preclinical studies or clinical trials, whether or not drug-related, could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Additionally, adverse effects may represent safety signals that could influence the benefit-risk assessment for further development or commercialization of a product candidate and may warrant further clinical or nonclinical investigation, consultation with health authorities, changes to product labeling or guidelines for its safe use, or other scientific or regulatory actions. Any of these occurrences may harm our business, financial condition and prospects significantly.

Further, if any of our future products, if and when approved for commercial sale, cause serious or unexpected adverse events, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of the product or impose restrictions on its distribution in the form of a REMS or provide a medication guide outlining the risks of such side effects for distribution to patients;
- regulatory authorities may require the addition of labeling statements, such as warnings or contraindications;
- we may be required to change the way the product is administered or conduct additional clinical trials;
- we could be sued and held liable for harm caused to patients; or
- our reputation may suffer.

Any of these events could prevent us or our partners from achieving or maintaining market acceptance of the affected product and could substantially increase the costs of commercializing our future products and impair our ability to generate revenues from the commercialization of these products.

Risks Related to Government Regulation

We currently do not have regulatory approval to market any of our product candidates. The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA, EMA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;

- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a New Drug Application ("NDA") or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may find deficiencies with or fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; or
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market mavacamten, MYK-491 or any other product candidate we may develop, which would significantly harm our business, results of operations and prospects.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

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

We cannot commercialize a product until the appropriate regulatory authorities have reviewed and approved the product candidate. Even if our product candidates demonstrate safety and efficacy in clinical trials, the regulatory agencies may not complete their review processes in a timely manner, or we may not be able to obtain regulatory approval. Additional delays may result if an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory agency policy during the period of product development, clinical trials and the review process. Regulatory agencies also may approve a treatment candidate for fewer or more limited indications than requested or may grant approval subject to the performance of post-marketing studies. In addition, regulatory agencies may not approve the labeling claims that are necessary or desirable for the successful commercialization of our treatment candidates. If we are unable to obtain regulatory approval for our product candidates for use in the treatment of heritable cardiomyopathies, our business may suffer.

Failure to obtain marketing approval in international jurisdictions would prevent our products from being marketed in such jurisdictions.

In order to market and sell our products in the European Union and many other jurisdictions, we or our third-party collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or these third parties may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, the failure to obtain approval in one jurisdiction may negatively impact our ability to obtain approval in other jurisdictions. We may not be able to file for marketing approvals, and even if we do, we may not obtain necessary approvals to commercialize our medicines in any market.

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

Any product candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to extensive and ongoing regulatory requirements and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, current Good Manufacturing Practice ("cGMP") requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, and requirements regarding the distribution of samples to physicians and recordkeeping. For example, the holder of an approved NDA is obligated to monitor and report adverse events and any failure of a product to meet the specifications in the NDA. The holder of an approved NDA must also submit new or supplemental applications and obtain FDA approval for certain changes to the approved product, product labeling or manufacturing process.

In addition, product manufacturers and their facilities are subject to payment of user fees and continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP and adherence to commitments made in the NDA and other marketing authorizations.

Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the medicine.

The FDA closely regulates the post-approval marketing and promotion of medicines to ensure that they are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use and if we do not market our medicines for their approved indications, we may be subject to enforcement action for off-label marketing.

In addition, later discovery of previously unknown problems with our medicines, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in various negative consequences, including:

- restrictions on the labeling, marketing or manufacturing of the product;
- restrictions on distribution or use of the product;
- requirements to conduct post-marketing clinical trials or holds on ongoing or planned clinical trials;
- warning or untitled letters;
- withdrawal of the medicines from the market;
- refusal by the FDA or comparable foreign regulatory authorities to approve pending applications or supplements to approved applications that we submit;
- mandatory or voluntary recalls;
- fines, restitution or disgorgement of profits or revenue;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our medicines;
- product seizure or detention; and
- injunctions or the imposition of civil or criminal penalties.

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

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize our product candidates and generate revenues.

We may seek one or more special designations from regulatory authorities for our product candidates, including Breakthrough Therapy Designation, Fast Track Designation or Orphan Drug Designation. These designations may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek one or more special designations from regulatory authorities for our product candidates, including Breakthrough Therapy Designation, Fast Track Designation or Orphan Drug Designation.

A breakthrough therapy is defined as a product that is intended, alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically important endpoints, such as substantial treatment effects observed early in clinical development. For products that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Products designated as breakthrough therapies by the FDA can also be eligible for accelerated approval. If a product is intended for the treatment of a serious or life-threatening condition and the product demonstrates the potential to address unmet medical needs for this condition, the product sponsor may apply for Fast Track Designation.

The FDA has broad discretion whether or not to grant these designations, so even if we believe a particular product candidate is eligible for a particular designation, we cannot assure you that the FDA would decide to grant it. Accordingly, even if we believe one of our product candidates meets the criteria for a designation, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a particular designation for a product candidate may not result in a faster development process, review or approval compared to products considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the products no longer meet the conditions for qualification and rescind the breakthrough designation. Further, the FDA may withdraw Fast Track Designation if it believes that the designation is no longer supported by data from a clinical development program.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the United States, Orphan Drug Designation entitles a party to incentives such as tax advantages and user-fee waivers. In April 2016, the FDA granted Orphan Drug Designation for mavacamten for use in the treatment of symptomatic obstructive HCM.

In addition, if a product that has Orphan Drug Designation subsequently receives the first approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which in the United States means that the FDA may not approve any other applications to market the same drug for the same indication for seven years, except in limited circumstances. The exclusivity granted under any Orphan Drug Designations that we have received or may receive may not effectively protect the product candidate from competition. Although we have received Orphan Drug Designation from the FDA for mavacamten for use in the treatment of symptomatic obstructive HCM, we may not be the first to obtain marketing approval of this drug for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve another drug with the same active moiety for the same condition if the FDA concludes that the later drug is clinically superior, in that it is shown to be safer, more effective or makes a major contribution to patient care. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. Any inability to secure or maintain Orphan Drug Designation or the exclusivity benefits of this designation would have an adverse impact on our ability to develop and commercialize our product candidates.

Risks Related to Our Reliance on Third Parties

From the inception of our collaboration arrangement with Sanofi in August of 2014 and through December 31, 2018 we were substantially dependent upon Sanofi for the development and eventual commercialization of mavacamten, MYK-224, MYK-491 and any product candidates from our HCM-2 program. As a result of the termination of the arrangement, we may be unable to commercialize certain product candidates.

We have previously depended upon our license and collaboration agreement with Aventis Inc., a wholly-owned subsidiary of Sanofi S.A. (Sanofi), which we refer to as the Collaboration Agreement, for financial and scientific resources related to the clinical development and commercialization of product candidates under our mavacamten, MYK-224, MYK-491 and HCM-2 programs and for the manufacturing of MYK-491. On December 31, 2018, Sanofi notified of their intent to terminate the collaboration and as a result, reimbursement for our research and development collaboration on mavacamten and MYK-224 ended in the first half of 2019. In addition, Sanofi did not elect to continue with the MYK-491 and HCM-2 programs, and the collaboration with respect to such programs was deemed terminated as of December 31, 2018.

As a result of the termination, any or all of the following are likely to occur:

- the development of our product candidates previously subject to the Collaboration Agreement could be significantly delayed;
- our cash expenditures will increase significantly if it is necessary for us to hire additional employees and allocate internal resources to the development and commercialization of product candidates that were previously funded, or expected to be funded, by Sanofi;
- we will bear all of the risks and costs related to the further development and commercialization of product candidates that were previously the subject of the Collaboration Agreement;
- in order to fund further development and commercialization, we may need to seek out and establish alternative strategic collaborations with third-party partners, which may not be possible; or
- we may not be able to do so on terms which are acceptable to us, in which case it may be necessary for us to limit the size or scope of one or more of our programs or increase our expenditures and seek additional funding by other means.

Any of these events would have a material adverse effect on our results of operations and financial condition.

We expect to rely on third parties to conduct some or all aspects of our protocol development, research and preclinical and clinical testing, and these third parties may not perform satisfactorily.

We do not expect to independently conduct all aspects of our protocol development, research and preclinical and clinical testing. We currently rely, and expect to continue to rely, on third parties with respect to these items.

Any of these third parties may terminate their engagements with us at any time. If we need to enter into alternative arrangements, it could delay our product development activities. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibility to ensure compliance with all required regulations and study protocols. For product candidates that we develop and commercialize on our own, we will remain responsible for ensuring that each of our preclinical studies and clinical trials are conducted in accordance with the study plan and protocols. We and our third-party contractors and CROs are required to comply with GCP regulations, which are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area ("EEA"), and comparable foreign regulatory authorities for all products in clinical development. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our third-party contractors or CROs fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our studies in accordance with regulatory requirements or our stated study plans and protocols, we will be delayed in completing, or may not be able to complete, the preclinical and clinical studies required to support future Investigational New Drug Application (IND) submissions and approval of our product candidates. Any of these events could lead to clinical study delays or failure to obtain regulatory approval, or impact our ability to successfully commercialize future products. Some of these events could be the basis for FDA action, including injunction, request for voluntary recall, seizure or total or partial suspension of production.

We contract with third parties for the manufacture of our product candidates for preclinical and clinical testing and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or medicines or that such supply will not be available to us at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not have any manufacturing facilities. We currently rely, and expect to continue to rely, on third-party manufacturers for the manufacture of our product candidates for preclinical and clinical testing and for the commercial supply of any of these product candidates for which we may obtain marketing approval. To date, we have obtained materials for mavacamten for our clinical trials from third-party manufacturers, and we intend to rely on third-party manufacturers for our planned Phase 2 and Phase 3 clinical development activities for mavacamten and for our Phase 2 and any subsequent clinical trials of MYK-491. Until the Collaboration Agreement termination on December 31, 2018, we relied on Sanofi for our MYK-491 supplies. We have executed service agreements with contract organizations for MYK-491 drug substance and drug product manufacturing and technical transfer activities are currently underway, although we may encounter delays in these activities.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured the product candidates ourselves, including:

- the inability to negotiate or maintain manufacturing agreements with third parties under commercially reasonable terms;
- reduced control as a result of using third-party manufacturers for all aspects of manufacturing activities;
- reliance on the third party for regulatory compliance, quality assurance, and safety and pharmacovigilance reporting;
- the possible breach of the manufacturing agreement by the third party;
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us; and
- disruptions to the operations of our third-party manufacturers or suppliers caused by conditions unrelated to our business or operations, including the bankruptcy of the manufacturer or supplier.

The facilities used by our contract manufacturers to manufacture any of our future products must be evaluated by the FDA pursuant to inspections that will be conducted after we submit an NDA to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the cGMP regulation for manufacture of both active drug substances and finished drug products. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities or our marketing applications will not be approved. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority finds deficiencies with or does not approve these facilities for the manufacture of our product candidates or if it finds deficiencies or withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or voluntary recalls of product candidates or medicines, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our medicines and harm our business and results of operations.

Any products that we may develop may compete with our other product candidates and products and the products of third parties for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for a redundant supply of bulk drug substances. If any one of our current contract manufacturers cannot perform as agreed, we may be required to replace that manufacturer. Although we believe that there are several potential alternative manufacturers who could manufacture our product candidates, we may incur added costs and delays in identifying and qualifying any such replacement.

Our current and anticipated future dependence upon others for the manufacture of our product candidates or medicines may adversely affect our future profit margins and our ability to commercialize any medicines that receive marketing approval on a timely and competitive basis.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent protection for our medicines and technology, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize medicines and technology similar or identical to ours, and our ability to successfully commercialize our medicines and technology may be adversely affected.

Our commercial success will depend, in part, on our ability to obtain and maintain patent protection in the United States and other countries with respect to our proprietary products and technology. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and medicines that are important to our business, by pursuing the grant of patents from those applications around the world, and by taking steps to defend those patents if challenged by third parties. It is not uncommon in the pharmaceutical industry for patents covering successful drugs to be challenged for invalidity by third parties before or after the grant of such patents by a patent office (e.g., by a pre- or post-grant proceeding in a patent office or a court action). Currently we own five issued U.S. patents, several foreign patents and multiple pending applications worldwide that relate to our proprietary technology or product candidates. We cannot be certain that we will secure any additional rights to any issued patents with claims that cover any of our proprietary technology or product candidates.

The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection on or due to the public disclosures of others or ourselves. Although we enter into non-disclosure and confidentiality agreements with parties who have access to patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for some of our technology and medicines, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. With respect to our proprietary scientific insights, screening assays and manufacturing processes, we consider trade secrets and know-how to be our primary intellectual property. Trade secrets and know-how can be difficult to protect. In particular, we anticipate that with respect to our precision medicine platform, these trade secrets and know-how will over time be acquired within the industry through independent development, the publication of journal articles describing methodologies and insights, and the movement of personnel skilled in the art into the pharmaceutical and biotechnology industry.

We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets, and discovery processes to aid in proving trade secret misappropriation may be limited in many foreign countries. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we may have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor or other third party, our competitive position could be harmed.

Third-party claims of intellectual property infringement may prevent or delay our development and commercialization efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including court actions for patent infringement or nullification, pre- and post-grant proceedings before the U.S. Patent and Trademark Office (“USPTO”), and corresponding proceedings in foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are pursuing development candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of the patent rights of third parties.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of any of our product candidates, any molecules formed during the manufacturing process or any final product itself, the holders of any such patents may be able to block or delay our ability to commercialize such product candidate unless we obtained a license under the applicable patents, or until such patents expire.

Parties making claims against us may also obtain injunctive or other equitable relief, which could effectively block or delay our ability to further develop and commercialize one or more of our product candidates. Defense of these claims, regardless of their merit, could involve substantial litigation expense and could be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may be required to take a number of steps, including but not limited to, paying substantial damages, including treble damages and attorneys' fees for willful infringement, paying lost profits or royalties, redesigning our infringing products or manufacturing process, obtaining one or more licenses from third parties for activities going forward, which may be impossible or require substantial time and monetary expenditure.

Parties making claims against us may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have material adverse effect on our ability to raise additional funds or otherwise have a material adverse effect on our business, results of operations, financial condition and prospects.

We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours or our licensors is not valid, is unenforceable and/or is not infringed, or may refuse to stop the other party from using the technology at issue for many reasons, including but not limited to, a determination that our patents do not cover the technology in question. Interference proceedings provoked by third parties or brought by us may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors or collaborators. An adverse result in any litigation or patent office proceeding could put one or more of our patents at risk, for example, of being invalidated, deemed unenforceable or interpreted narrowly or could put our patent applications at risk of not issuing.

An unfavorable outcome could require us to cease using a technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of our patents and patent applications may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, these perceptions could have a material adverse effect on the price of our common stock.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may also be subject to claims that third parties, including but not limited to, former employees and collaborators, have an ownership interest in our patents or other intellectual property. In the future, we may have ownership disputes arising, for example, from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as the exclusive ownership of, or the right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation or arbitration could result in substantial costs and be a distraction to management and other employees.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court.

If we or one of our licensing partners initiated legal proceedings against a third party to enforce a patent covering one of our product candidates or the use or manufacture thereof, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including utility, written description, novelty, non-obviousness or enablement. Additionally, in the United States, a patent can be deemed unenforceable if someone connected with the prosecution of a patent application intentionally withheld materially relevant information from the USPTO, or intentionally mislead the USPTO during prosecution. Third-party challenges to the validity and/or enforceability of a patent can occur in courts in the United States or abroad, or in pre- or post-grant proceedings in some foreign patent offices (e.g., but not limited to re-examination, post grant review, inter parties review, or opposition proceedings). Such proceedings could result in the revocation of, or amendment to, our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability of one of our patents for a product candidate, this could substantially affect our ability to protect that product candidate in the country in which the patent was issued. Such a loss of patent protection could have a material adverse impact on our business.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is common in the biotechnology and pharmaceutical industry, we employ individuals who were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of any of our employee's former employer or other third parties. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages and suffering reputational harm, we may lose valuable intellectual property rights or personnel, which could adversely impact our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Risks Related to Commercialization and the Market for Our Product Candidates

If the market opportunities for our product candidates are smaller than we believe they are or if we are unable to market our products to expanded patient populations, our revenues may be adversely affected and our business may suffer.

We focus our research and product development efforts on treatments for cardiac muscle contraction and our targeted indications are rare genetic diseases. In particular, we estimate that approximately 630,000 people in the United States have a form of HCM, and that approximately 360,000 people in the United States have a form of genetic DCM. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are based on estimates derived from primary research with physicians and payors, analysis of medical journals and peer-reviewed literature, the work of third-party consultants and other publicly- or non-publicly-available data sources. These estimates may prove to be incorrect and new studies may change the estimated incidence or prevalence of our targeted disease indications. The number of patients in the United States, Europe and elsewhere may turn out to be lower than expected, may not be otherwise amenable to treatment with our products, and new patients may become increasingly difficult to identify or gain access to, all of which would adversely affect our results of operations and our business.

Additionally, because the target patient populations of our product candidates are small, we must be able to successfully identify patients and achieve a significant market share to achieve or maintain profitability and growth. .

Even if any of our product candidates receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

If any of our product candidates receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors and others in the medical community. For example, current cardiovascular disease treatments such as beta blockers, non-dihydropyridine calcium channel blockers and disopyramide are well-established in the medical community, and doctors may continue to rely on these treatments. If our product candidates do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- efficacy and potential advantages compared to alternative treatments;
- the ability to offer our medicines for sale at competitive prices;
- convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- sufficient third-party coverage or reimbursement; and
- the prevalence and severity of any side effects.

Any failure to achieve or maintain sufficient market acceptance of mavacamten, MYK-491 or any of our other product candidates, if approved, could significantly harm our business, prospects, financial condition and results of operations.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may be unable to generate any revenues.

We have no experience marketing or selling our product candidates. To successfully commercialize any products that may result from our development programs, we will need to develop these capabilities, either on our own or with others. We may enter into collaborations with other entities to utilize their mature marketing and distribution capabilities, but we may be unable to enter into marketing agreements on favorable terms, if at all. If any future collaborations that we may enter into do not provide for sufficient resources to commercialize our future products, if any, and we are unable to develop the necessary marketing capabilities on our own, we will be unable to generate sufficient product revenue to sustain our business. We will be competing with many companies that currently have extensive and well-funded marketing and sales operations. Without an internal team or the support of a third party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies.

The insurance coverage and reimbursement status of newly-approved products targeting small patient populations is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford expensive treatments, such as endothelin receptor antagonists used in the treatment of certain cardiovascular diseases. Sales of our product candidates will depend substantially, both domestically and abroad, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. Additionally, therapies directed at small patient populations, such as our product candidates, may be more expensive, and reimbursement options for these therapies may be more limited. If reimbursement or coverage is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products and for products whose targeted patient populations are small. In the United States, the principal decisions about reimbursement for new medicines are typically made by the Centers for Medicare & Medicaid Services (“CMS”), an agency within the U.S. Department of Health and Human Services, as CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare. Private payors tend to follow CMS to a substantial degree. It is difficult to predict what CMS or third-party payors will decide with respect to reimbursement and coverage for fundamentally novel products such as ours, as there is no body of established practices and precedents for these new products. Reimbursement agencies in Europe may be more conservative than CMS.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe, Canada, and other countries may put pressure on the pricing and usage of our product candidates. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. In general, the prices of medicines under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for medicines but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenues and profits.

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

Risks Related to Our Business and Industry

We may be subject to healthcare, health information privacy and security laws, regulation and enforcement, and our failure to comply with these laws could harm our results of operations and financial conditions.

Although we do not currently have any products on the market, if we obtain FDA approval for any of our product candidates and begin commercializing those products in the United States, our operations may be directly, or indirectly through our customers and third-party payors, subject to various U.S. federal and state fraud and abuse, patient privacy and other healthcare regulatory laws, and to additional healthcare, statutory and regulatory requirements and enforcement by foreign regulatory authorities in jurisdictions in which we conduct our business. Healthcare providers, physicians and other healthcare market participants play a primary role in the recommendation and prescription of any product for which we obtain marketing approval. These laws may impact, among other things, our proposed sales, marketing and education programs and constrain the business of financial arrangements and relationships with healthcare providers, physicians and other parties through which we market, sell and distribute our products for which we obtain marketing approval. The laws that may affect our ability to operate include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or paying any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under U.S. federal and state healthcare programs such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the U.S. federal False Claims Act, which imposes civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;
- the U.S. federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA") which imposes criminal and civil liability for knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services; similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH") and its implementing regulations, and as amended again by the final HIPAA omnibus rule, Modifications to the HIPAA Privacy, Security, Enforcement and Breach Notification Rules Under HITECH and the Genetic Information Nondiscrimination Act; Other Modifications to the HIPAA Rules, published in January 2013, which imposes certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without appropriate authorization on covered entities subject to the rule, such as health plans, healthcare clearinghouses and healthcare providers as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information;

- the U. S. Federal Food, Drug, and Cosmetic Act ("FDCA") which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U. S. legislation commonly referred to as the Physician Payments Sunshine Act, enacted as part of The Patient Protection and Affordable Care Act ("ACA") and its implementing regulations, which requires certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program to report annually to CMS information related to payments and other transfers of value to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;
- analogous state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; and state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts; and
- European and other foreign law equivalents of each of the laws, including reporting requirements detailing interactions with and payments to healthcare providers.

In addition, regulators globally are also imposing greater monetary fines for privacy violations. For example, in 2016, the European Union adopted a new regulation governing data practices and privacy called the General Data Protection Regulation ("GDPR") which became effective on May 25, 2018. The GDPR applies to any company established in the European Union as well as to those outside the European Union if they collect and use personal data in connection with the offering goods or services to individuals in the European Union or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, special protections for "sensitive information" such as health and genetic information, expanded disclosures about how personal information is to be used, limitations on retention of information, mandatory data breach notification requirements and onerous new obligations on service providers. Non-compliance with the GDPR may result in monetary penalties of up to €20 million or 4% of worldwide revenue, whichever is higher. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of personal data, such as healthcare data or other sensitive information, could greatly increase our cost of developing or commercializing our product candidates or impair our ability to collect data from patients resident in the European Union.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from U.S. government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment. If any of the above occur, it could adversely affect our ability to operate our business and our results of operations.

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

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

Our competitors may:

- develop drug candidates and market drugs that are less expensive or more effective than our future drugs;
- commercialize competing drugs before we or our partners, if any, can launch any drugs developed from our drug candidates;
- initiate or withstand substantial price competition more successfully than we can;
- have greater success in recruiting skilled scientific workers from the limited pool of available talent;
- more effectively negotiate third-party licenses and strategic collaborations; and
- take advantage of acquisition or other opportunities more readily than we can.

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

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

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

Public opinion and heightened regulatory scrutiny of precision medicine for the treatment of cardiovascular disease may impact public perception of our product candidates or adversely affect our ability to conduct our business or obtain regulatory approvals for our product candidates.

Precision medicine remains a novel technology, particularly in the field of cardiovascular disease, with no products approved to date in the United States that are specifically targeted at correcting the underlying biomechanical defects in cardiac contractility associated with HCM and DCM. Public perception may be influenced by claims that these therapies are unproven or unsafe, and our product candidates may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians, who specialize in the treatment of those diseases that our product candidates target, prescribing treatments that involve the use of our product candidates in lieu of, or in addition to, existing treatments they are already familiar with and for which greater clinical data may be available. More restrictive government regulations or negative public opinion could have an adverse effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for any products we may develop. Adverse events in our clinical trials, even if not ultimately attributable to our product candidates, and the resulting publicity, could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our product candidates, stricter labeling requirements for those product candidates that are approved and a decrease in demand for any such product candidates.

Healthcare legislative changes may have a material adverse effect on our business and results of operations.

In the United States, the European Union and other foreign jurisdictions, there have been a number of legislative and regulatory changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the United States federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, ACA changed the way healthcare is financed by both governmental and private insurers and significantly impacted the U.S. pharmaceutical and biotechnology industries. The ACA, among other things, subjects biologic products to potential competition by lower-cost biosimilars, addresses a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations, establishes annual fees and taxes on manufacturers of certain branded prescription drugs and biologic products, and implements a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.

The current presidential administration has indicated that enacting change to the ACA is a legislative priority and has alternatively discussed repealing and replacing the ACA. In January 2017, Congress voted to adopt a budget resolution for fiscal year 2017 that, while not a law, is widely viewed as the first step toward the passage of legislation that would repeal certain aspects of the ACA. The 2017 Tax Reform Act includes a provision repealing the individual mandate, effective January 1, 2019. Further, on January 20, 2017, U.S. President Donald Trump signed an executive order directing federal agencies with authorities and responsibilities under the ACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. On October 13, 2017, President Trump signed an executive order terminating the cost-sharing subsidies that reimburse insurers under the ACA. Several state Attorneys General filed suit to stop the administration from terminating the subsidies, but their request for a restraining order was denied by a federal judge in California on October 25, 2017. Further, on June 14, 2018, the U.S. Court of Appeals for the Federal Circuit ruled that the federal government was not required to pay more than $12 billion in ACA risk corridor payments to third-party payors who argued that such payments were owed to them. The effects of this gap in reimbursement on third-party payors, the viability of the ACA marketplace, providers, and potentially our business, are not yet known.

In July 2018, CMS published a final rule permitting further collections and payments to and from certain ACA-qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. In addition, CMS has recently published a final rule that would give states greater flexibility, starting in 2020, in setting benchmarks for insurers in the individual and small group marketplaces, which may have the effect of relaxing the essential health benefits required under the ACA for plans sold through such marketplaces.

Since its enactment, some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial, congressional, or executive challenges. As a result, there have been delays in the implementation of, and action taken to repeal or replace, certain aspects of the ACA. The U.S. Supreme Court has upheld certain key aspects of the legislation, including a tax-based shared responsibility payment imposed on certain individuals who fail to maintain qualifying health coverage for all or part of a year or pay a penalty, which is commonly known as the "individual mandate." However, as a result of tax reform legislation passed in December 2017, the individual mandate has been eliminated effective January 1, 2019. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas (the "Texas District Court Judge"), ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Cuts and Jobs Act of 2017 (the "Tax Act"), the remaining provisions of the ACA are invalid as well. The Trump administration and CMS have both stated that the ruling will have no immediate effect, and on December 30, 2018 the Texas District Court Judge issued an order staying the judgment pending appeal.

On January 22, 2018, President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. The Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole."

In addition, other legislative changes have been proposed and adopted in the United States since ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2025 unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other health care funding, which could have a material adverse effect on our customers and accordingly, our financial operations.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. The U.S. federal government has set a goal of moving 50% of Medicare payments into these "Alternative Payment Models" by the end of 2018. In addition, recently there has been heightened governmental scrutiny over the manner in which drug manufacturers set prices for their commercial products. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Our future success depends on our ability to retain key employees and consultants, including our scientific advisors and founders, and to attract, retain and motivate qualified personnel.

We are highly dependent on our scientific advisors and founders and the principal members of our executive team, the loss of whose services may adversely impact the achievement of our objectives. While we have entered into employment agreements with each of our executive officers, any of them could leave our employment at any time, as all of our employees are "at will" employees. Recruiting and retaining other qualified employees, consultants and advisors for our business, including scientific and technical personnel, will also be critical to our success. There is currently a shortage of skilled executives and scientific experts in our industry, which is likely to continue. As a result, competition for skilled personnel is intense and the turnover rate can be high. We may not be able to attract and retain personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies, as well as from academic and research institutions, for individuals with similar skill sets. In addition, any failure of our programs to succeed in preclinical studies or clinical trials may make it more challenging to recruit and retain qualified personnel. The inability to recruit or the loss of the services of any executive, key employee, consultant or advisor may impede the progress of our research, development and commercialization objectives.

We will need to expand our organization and we may experience difficulties in managing this growth, which could disrupt our operations.

As of June 30, 2019, we had 210 full-time employees. As we mature, we expect to expand our full-time employee base and to hire more consultants and contractors. Our management may need to divert a disproportionate amount of its attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. We may not be able to effectively manage the expansion of our operations, which may result in weaknesses in our infrastructure, operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of additional product candidates. If our management is unable to effectively manage our growth, our expenses may increase more than expected, our ability to generate and/or grow revenues could be reduced, and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize product candidates and compete effectively will depend, in part, on our ability to effectively manage any future growth.

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

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

Inadequate funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including most recently from December 22, 2018 to January 25, 2019, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Our anticipated international operations may expose us to business, regulatory, political, operational, financial, pricing and reimbursement and economic risks associated with doing business outside of the United States.

We have a wholly-owned Australian subsidiary through which we conduct clinical trials in Australia. Our business strategy also contemplates potential additional international operations as we seek to continue the development of mavacamten, MYK-491 and other product candidates that we have or may identify, seek regulatory approval for our product candidates, and commercialize any product candidates that are approved outside the United States. If any product candidates for which we have retained worldwide commercial rights are approved, we may hire sales representatives and conduct physician and patient group outreach activities outside of the United States. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting, and changing laws and regulations such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements, and other governmental approvals, permits, and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our products in various countries;
- complexities and difficulties in obtaining protection for and enforcing our intellectual property rights;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors, or patient self-pay systems;
- limits in our ability to penetrate international markets;
- financial risks, such as exposure to foreign currency exchange rate fluctuations and their impact on payments required in local currency;
- natural disasters, political and economic instability, including wars, terrorism, and political unrest, outbreak of disease, boycotts, curtailment of trade, and other business restrictions;
- certain expenses including, among others, expenses for travel, translation, and insurance; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions, or its anti-bribery provisions.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our results of operations.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Our employees, independent contractors, principal investigators, CROs, consultants, vendors and collaboration partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.

We are exposed to the risk that our employees, independent contractors, principal investigators, CROs, consultants, vendors and collaboration partners may engage in fraudulent conduct or other illegal activities. Misconduct by these parties could include intentional, reckless and/or negligent conduct or unauthorized activities that violate: (i) the regulations of the FDA, EMA and other regulatory authorities, including those laws that require the reporting of true, complete and accurate information to such authorities; (ii) manufacturing standards; (iii) federal and state data privacy, security, fraud and abuse and other healthcare laws and regulations in the United States and abroad; or (iv) laws that require the reporting of true, complete and accurate financial information and data. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws could also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent misconduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with such laws or regulations. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other U.S. federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Unfavorable global economic and political conditions could adversely affect our business, financial condition or results of operations.

Our ability to invest in and expand our business and meet our financial obligations, to attract and retain third-party contractors and collaboration partners and to raise additional capital depends on our operating and financial performance, which, in turn, is subject to numerous factors, including the prevailing economic and political conditions and financial, business and other factors beyond our control, such as the rate of unemployment, the number of uninsured persons in the United States, political influences and inflationary pressures. For example, an overall decrease in or loss of insurance coverage among individuals in the United States as a result of unemployment, underemployment or the potential repeal of certain provisions of the ACA, may decrease the demand for healthcare services and pharmaceuticals. If fewer patients are seeking medical care because they do not have insurance coverage, we may experience difficulties in any eventual commercialization of our product candidates and our business, results of operations, financial condition and cash flows could be adversely affected.

In addition, our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets upon which biopharmaceutical companies such as us are dependent for sources of capital. In the past, global financial crises have caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including a reduced ability to raise additional capital when needed on acceptable terms, if at all, and weakened demand for our product candidates. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

We or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Earthquakes or other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, particularly when taken together with our lack of earthquake insurance, could have a material adverse effect on our business.

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

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any medicines that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or medicines caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or medicines that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue; and
- the inability to commercialize mavacamten, MYK-491 or any other product candidates that we may develop.

Although we maintain product liability insurance, including coverage for clinical trials that we sponsor, it may not be adequate to cover all liabilities that we may incur. We anticipate that we will need to increase our insurance coverage as we commence additional clinical trials and if we successfully commercialize any product candidates. The market for insurance coverage is increasingly expensive, and the costs of insurance coverage will increase as our clinical programs increase in size. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Our internal computer systems, or those of our third-party CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our operations.

Despite the implementation of security measures, our internal computer systems and those of our third-party CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs. For example, the loss of clinical trial data for our product candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to our data or applications or other data or applications relating to our technology or product candidates, or inappropriate disclosure of confidential or proprietary information, we could incur liabilities and experience delays or disruptions to various aspects of our operations, including our financial reporting and the development of our product candidates.

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

We have incurred substantial losses during our history and do not expect to become profitable in the near future. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code") if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership over a rolling three-year period, the corporation's ability to use its pre-change net operating loss carryforwards ("NOLs") and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. While we have determined that an ownership change occurred in April 2015 in connection with our Series B redeemable convertible preferred stock financing and in August 14, 2017 due to a subsequent stock offering, we do not believe that these ownership changes will result in the expiration of any of our existing NOLs prior to utilization. We may experience subsequent shifts in our stock ownership, some of which are outside our control. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

In addition, under the Tax Act, the amount of post-2017 NOLs that we are permitted to deduct in any taxable year is limited to 80% of our taxable income in such year, where taxable income is determined without regard to the NOL deduction itself. The Tax Act generally eliminates the ability to carry back any NOL to prior taxable years, while allowing post-2017 unused NOLs to be carried forward indefinitely. There is a risk that due to changes under the Tax Act, regulatory changes or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities.

Risks Related to Our Common Stock

The market price of our common stock has been and may continue to be highly volatile.

The market price of our common stock has experienced volatility since our IPO in October 2015 and is likely to continue to be volatile. Our stock price could be subject to wide fluctuations in response to a variety of factors, including the following:

- adverse results or delays in preclinical studies or clinical trials;
- reports of adverse events in clinical trials of our product candidates or in other products for the treatment of cardiovascular diseases or clinical trials of such products;
- inability to obtain additional funding;
- any delay in filing an IND or NDA for any of our product candidates and any adverse development or perceived adverse development with respect to the FDA's review of that IND or NDA;
- failure to develop successfully and commercialize our product candidates;
- failure by us or our licensors and strategic collaborators, if any, to prosecute, maintain or enforce our intellectual property rights;
- changes in laws or regulations applicable to future products;
- inability to obtain adequate product supply for our product candidates or the inability to do so at acceptable prices;
- adverse regulatory decisions affecting our product candidates or development programs;
- introduction of new products, services or technologies by our competitors;
- failure to meet or exceed financial projections we may provide to the public or to the investment community;
- the perception of the pharmaceutical industry by the public, legislatures, regulators and the investment community;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us, our strategic collaboration partner or our competitors;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- additions or departures of key scientific or management personnel;
- significant lawsuits, including patent or stockholder litigation;
- changes in the market valuations of similar companies;

- sales of our common stock by us or our stockholders in the future; and
- trading volume of our common stock.

In addition, companies trading in the stock market in general, and The NASDAQ Global Select Market ("NASDAQ") in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

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

Additional capital will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

In addition, sales of a substantial number of shares of our outstanding common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. A substantial number of our outstanding shares of common stock are held by a relatively small number of stockholders who are not subject to restrictions on trading. Sales by our stockholders of a substantial number of shares, or the expectation that such sales may occur, could significantly reduce the market price of our common stock.

We have also registered all shares of our common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. As a result, these shares will be eligible for sale in the public market to the extent permitted by any applicable vesting requirements and the exercise of options, and restrictions under applicable securities laws. In addition, our directors, executive officers and certain affiliates have established or may in the future establish programmed selling plans under Rule 10b5-1 of the Securities Exchange Act of 1934, as amended, for the purpose of effecting sales of our common stock. If any of these events cause a large number of our shares to be sold in the public market, the sales could reduce the trading price of our common stock and impede our ability to raise future capital. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Pursuant to our 2015 Stock Option and Incentive Plan (the "2015 Plan"), we are authorized to grant stock options and other equity-based awards to our employees, directors and consultants. Beginning on January 1, 2017, the number of shares available for future grant under the 2015 Plan will automatically increase each year by up to 4% of all shares of our capital stock outstanding as of December 31 of the prior calendar year, subject to the ability of our board of directors to take action to reduce the size of the increase in any given year. In addition, pursuant to our 2015 Employee Stock Purchase Plan (the "2015 ESPP"), we have initially reserved 255,000 shares for purchase by eligible employees. Beginning on January 1, 2017 and ending on January 1, 2025, the number of shares available for future issuance under the 2015 ESPP will automatically increase each year by up to the lesser of 3,000,000 shares of common stock or 1% of all shares of our capital stock outstanding as of December 31 of the prior calendar year, subject to the ability of our board of directors to take action to reduce the size of the increase in any given year. Currently, we plan to register the increased number of shares available for issuance under the 2015 Plan and the 2015 ESPP each year. If our board of directors elects to increase the number of shares available for future grant under these plans by the maximum amount each year, our stockholders may experience additional dilution, which could cause our stock price to fall.

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

As of August 5, 2019, our executive officers, directors, five percent or greater stockholders and their affiliates beneficially own approximately 40.9% of our outstanding voting stock. These stockholders will have the ability to influence us through their ownership positions. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders, acting together, may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may believe are in your best interest as one of our stockholders.

We have broad discretion in the use of our cash and cash equivalents and may not use them effectively.

Our management has broad discretion in the application of our existing cash and cash equivalents, and you will not have the opportunity to assess whether our existing cash and cash equivalents are being used appropriately. Because of the number and variability of factors that will determine our use of our existing cash and cash equivalents, their ultimate use may vary substantially from their currently intended use. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest our cash and cash equivalents in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders.

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

The trading market for our common stock will depend, in part, on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts may not publish an adequate amount of research on our company, which may negatively impact the trading price for our stock. In addition, if one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. Further, if our operating results fail to meet the forecasts of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

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

As a public company, and particularly because we are no longer an emerging growth company, we incur and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act and rules subsequently implemented by the SEC and NASDAQ have imposed various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance.

Pursuant to Section 404, we are required to furnish a report by our management on our internal control over financial reporting with our Annual Report on Form 10-K for each fiscal year and to obtain an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we are and will continue to be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting.

Despite our efforts, there is a risk that neither we nor our independent registered public accounting firm will be able to conclude within the prescribed timeframe that our internal control over financial reporting is effective as required by Section 404. This could impair our ability to produce timely and accurate consolidated financial statements and result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements.

Our operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult to predict our future operating results. Our net loss and other operating results will be affected by numerous factors, many of which are outside of our control and may be difficult to predict, including:

- variations in the level of expenses related to our clinical development programs, our precision medicine platform or our preclinical research and development programs;
- the timing and success or failure of preclinical studies and clinical trials for our product candidates or competing product candidates;

- our ability to obtain regulatory approval for our product candidates, and the timing and scope of any such approvals we may receive;
- if any of our product candidates receives regulatory approval, the level of underlying demand for these product candidates and our ability to successfully commercialize any approved product;
- addition or termination of clinical trials or funding support;
- our execution of any new collaborative, licensing or similar arrangements, and the timing of payments we may make or receive under these arrangements;
- any intellectual property infringement or other lawsuits in which we may become involved; and
- regulatory developments affecting our product candidates or those of our competitors.

If our operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. Additionally, due to the unpredictability of our quarterly and annual operating results, we believe that period-to-period comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

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

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology and pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders or remove our current management.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain provisions that may have the effect of delaying or preventing a change in control of us or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that:

- authorize "blank check" preferred stock, which could be issued by our board of directors without stockholder approval and may contain voting, liquidation, dividend and other rights superior to our common stock;
- create a classified board of directors whose members serve staggered three-year terms;
- specify that special meetings of our stockholders can be called only by our board of directors, the chairperson of our board of directors, our chief executive officer or our president;
- prohibit stockholder action by written consent;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that our directors may be removed only for cause and with the vote of the holders of 75% or more of our outstanding capital stock then entitled to vote at an election of directors;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even if less than a quorum;
- specify that no stockholder is permitted to cumulate votes at any election of directors;

- expressly authorize our board of directors to modify, alter or repeal our amended and restated bylaws; and
- require supermajority votes of the holders of our common stock to amend specified provisions of our amended and restated certificate of incorporation and amended and restated bylaws.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

Any provision of our amended and restated certificate of incorporation or amended and restated bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock and could also affect the price that some investors are willing to pay for our common stock.

Item 6. Exhibits

The following exhibits are filed or furnished as part of this Quarterly Report on Form 10-Q:

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference From	Date	Number	Filed Herewith
3.1	Restated Certificate of Incorporation.	10-Q	11/18/2015	3.1	
3.2	Amended and Restated Bylaws.	S-1/A	10/13/2015	3.4	
4.1	Specimen Common Stock Certificate.	S-1/A	10/19/2015	4.1	
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.				X
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.				X
32.1*	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.				X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.				X
104	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101.)				X

* The certification attached as Exhibit 32.1 that accompanies this Quarterly Report on Form 10-Q is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of MyoKardia, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: August 7, 2019

MYOKARDIA, INC.

By: /s/ Tassos Gianakakos
Tassos Gianakakos
President, Chief Executive Officer
(Principal Executive Officer)

Date August 7, 2019

By: /s/ Taylor Harris
Taylor Harris
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION OF THE PRINCIPAL EXECUTIVE OFFICER

PURSUANT TO

SECURITIES EXCHANGE ACT RULES 13A-14(A) AND 15D-14(A)

I, Tassos Gianakakos, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of MyoKardia, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2019

/s/ Tassos Gianakakos
Tassos Gianakakos
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF THE PRINCIPAL FINANCIAL OFFICER

PURSUANT TO

SECURITIES EXCHANGE ACT RULES 13A-14(A) AND 15D-14(A)

I, Taylor Harris, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of MyoKardia, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2019

/s/ Taylor Harris
Taylor Harris
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of MyoKardia, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended June 30, 2019, as filed with the Securities and Exchange Commission (the "Report"), Tassos Gianakakos, Chief Executive Officer of the Company, and Taylor Harris, Chief Financial Officer (Principal Financial and Accounting Officer) of the Company, respectively, do each hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 7, 2019

/s/ Tassos Gianakakos
Tassos Gianakakos
Chief Executive Officer
(Principal Executive Officer)

/s/ Taylor Harris
Taylor Harris
Chief Financial Officer
(Principal Financial and Accounting Officer)

A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350), has been provided to MyoKardia, Inc. and will be retained by MyoKardia, Inc. and furnished to the Securities and Exchange Commission or its staff upon request. This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of MyoKardia, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.