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

FORM 10-Q

☐ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934.**

For the quarterly period ended June 30, 2017.

☐ **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: 001-37625

Voyager Therapeutics, Inc.
(Exact name of Registrant as specified in its charter)

Delaware	**46-3003182**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
75 Sidney Street, Cambridge, Massachusetts	**02139**
(Address of principal executive offices)	**(Zip Code)**

(857) 259-5340
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

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

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

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

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

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

The number of outstanding shares of the registrant's common stock, par value $0.001 per share, as of August 4, 2017 was 26,903,694.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, statements about:

- our ability to continue to advance VY-AADC01 through the current Phase 1b clinical trial as a treatment for advanced Parkinson's disease and advance VY-AADC02 into later-stage clinical trials;
- our ability to advance our other programs through preclinical development and into clinical trials, and successfully complete such clinical trials;
- our ability to file an Investigational New Drug application, or IND, for our VY-SOD101 program for a monogenic form of amyotrophic lateral sclerosis in late 2017 or early 2018, and file INDs for two of our other preclinical programs;
- the accuracy of our estimates regarding expenses, future revenues and capital requirements;
- our ability to continue to develop our product engine;
- our ability to develop a manufacturing capability compliant with current good manufacturing practices for our product candidates;
- our ability to access or develop devices to deliver our AAV gene therapies to critical targets of neurological disease;
- regulatory developments in the United States and the European Union and other important geographies such as Japan;
- our ability to obtain and maintain intellectual property protection for our proprietary assets;
- the size of the potential markets for our product candidates and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates for any indication once approved;
- the possibility and timing of Sanofi-Genzyme's exercise of their option to the programs identified in the Collaboration Agreement;
- our ability to obtain additional financing when needed either from partners or investors; and
- the success of competing products that are or become available for the indications that we are pursuing.

These forward-looking statements are only predictions and we may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, so you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our business, financial condition and operating results. We have included important factors in the cautionary statements included in this Quarterly Report on Form 10-Q, particularly in Part II, Item 1A. Risk Factors that could cause actual future results or events to differ

materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to the Quarterly Report on Form 10-Q with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements whether as a result of new information, future events or otherwise, except as required by applicable law.

VOYAGER THERAPEUTICS, INC.

FORM 10-Q

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PART I. FINANCIAL INFORMATION

Voyager Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(amounts in thousands, except share and per share data)
(unaudited)

	June 30, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 66,300	$ 36,641
Marketable securities, current	75,023	137,777
Prepaid expenses and other current assets	3,403	4,368
Total current assets	144,726	178,786
Property and equipment, net	10,674	7,893
Deposits and other non-current assets	1,534	1,527
Marketable securities, non-current	1,480	1,360
Total assets	$ 158,414	$ 189,566
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 307	$ 550
Accrued expenses	7,314	6,488
Deferred revenue, current portion	4,215	6,764
Total current liabilities	11,836	13,802
Deferred rent	5,430	4,999
Deferred revenue, net of current portion	34,838	34,818
Other non-current liabilities	1,019	25
Total liabilities	53,123	53,644
Commitments and contingencies (see note 6)		
Stockholders' equity:		
Preferred stock $0.001 par value: 5,000,000 shares authorized at June 30, 2017 and December 31, 2016; no shares issued and outstanding at June 30, 2017 and December 31, 2016	—	—
Common stock, $0.001 par value: 120,000,000 shares authorized at June 30, 2017 and December 31, 2016; 26,002,873 and 25,597,912 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively	26	26
Additional paid-in capital	230,773	225,963
Accumulated other comprehensive income (loss)	30	(52)
Accumulated deficit	(125,538)	(90,015)
Total stockholders' equity	105,291	135,922
Total liabilities and stockholders' equity	$ 158,414	$ 189,566

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

Voyager Therapeutics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(amounts in thousands, except share and per share data)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Collaboration revenue	$ 1,177	$ 3,720	$ 2,642	$ 8,550
Operating expenses:				
Research and development	15,300	10,484	29,372	19,216
General and administrative	4,516	2,854	9,430	6,419
Total operating expenses	19,816	13,338	38,802	25,635
Operating loss	(18,639)	(9,618)	(36,160)	(17,085)
Other (expense) income:				
Interest income, net	255	433	508	898
Other (expense) income, net	(297)	(150)	98	(336)
Total other (expense) income	(42)	283	606	562
Loss before income taxes	(18,681)	(9,335)	(35,554)	(16,523)
Income tax provision	(195)	—	31	—
Net loss	$ (18,876)	$ (9,335)	$ (35,523)	$ (16,523)
Other comprehensive (loss) income				
Unrealized (loss) gain on available-for-sale-securities, net of income tax (benefit) provision of $(191) and $53 for the three and six months ended June 30, 2017, respectively	(295)	30	82	311
Total other comprehensive (loss) income	(295)	30	82	311
Comprehensive loss	$ (19,171)	$ (9,305)	$ (35,441)	$ (16,212)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.73)	$ (0.37)	$ (1.37)	$ (0.66)
Weighted-average common shares outstanding, basic and diluted	25,946,333	25,228,405	25,869,390	25,152,587

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

Voyager Therapeutics, Inc.
Condensed Consolidated Statements of Cash Flows
(amounts in thousands)
(unaudited)

	Six Months Ended June 30,	
	2017	**2016**
Cash flow from operating activities		
Net loss	$ (35,523)	$ (16,523)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	3,704	2,739
Depreciation	726	288
Amortization of premiums and discounts on marketable securities	169	427
In-kind research and development expenses	113	752
Other non-cash items	(144)	75
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	965	73
Other non-current assets	—	57
Deferred revenue	(2,642)	(8,550)
Accounts payable	(243)	(158)
Accrued expenses	731	1,619
Other non-current liabilities	1,000	—
Lease incentive benefit	515	—
Net cash used in operating activities	(30,629)	(19,201)
Cash flow from investing activities		
Purchases of property and equipment	(3,412)	(657)
Change in restricted cash	—	(471)
Purchases of marketable securities and warrants	—	(12,041)
Proceeds from maturities of marketable securities	62,600	68,000
Net cash provided by investing activities	59,188	54,831
Cash flow from financing activities		
Proceeds from the exercise of stock options	1,100	93
Net cash provided by financing activities	1,100	93
Net increase in cash and cash equivalents	29,659	35,723
Cash and cash equivalents, beginning of period	36,641	31,309
Cash and cash equivalents, end of period	$ 66,300	$ 67,032
Supplemental disclosure of cash and non-cash activities		
Capital expenditures incurred but not yet paid	$ 95	$ —

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

VOYAGER THERAPEUTICS INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of business

Voyager Therapeutics, Inc. ("the Company") is a clinical stage gene therapy company focused on developing life changing treatments for patients suffering from severe neurological diseases. The Company focuses on neurological diseases where it believes that an adeno associated virus ("AAV") gene therapy approach can have a clinically meaningful impact by either increasing or decreasing the production of a specific protein. The Company has created a product engine that enables it to engineer, optimize, manufacture and deliver its AAV based gene therapies that have the potential to provide durable efficacy following a single administration. The Company's pipeline consists of six programs including advanced Parkinson's disease; a monogenic form of amyotrophic lateral sclerosis; Huntington's disease; Friedreich's ataxia; frontotemporal dementia / Alzheimer's disease; and severe, chronic pain.

The Company is devoting substantially all of its efforts to product research and development, activities related to its product engine, and raising capital. The Company is subject to risks common to companies in the biotechnology and gene therapy industry, including but not limited to, risks of failure of pre-clinical studies, and clinical trials, the need to obtain marketing approval for its drug product candidates, the need to successfully commercialize and gain market acceptance of its drug product candidates, dependence on key personnel, protection of proprietary technology, compliance with government regulations, development by competitors of technological innovations and ability to transition from pilot scale manufacturing to large scale production of products.

In February 2015, the Company entered into an agreement with Sanofi-Genzyme ("Collaboration Agreement"), which included a non-refundable upfront payment of $65.0 million. In addition, contemporaneous with entering into the Collaboration Agreement, Sanofi-Genzyme entered into a Series B Stock Purchase Agreement, under which Sanofi-Genzyme purchased 10,000,000 shares of Series B Preferred Stock for $30.0 million.

Through June 30, 2017, the Company had raised approximately $278.0 million of proceeds from sales of convertible preferred stock and common stock, including its initial public offering, and proceeds from the Collaboration Agreement. The Company believes that its cash, cash equivalents, and marketable debt securities of $141.3 million as of June 30, 2017 is sufficient to fund its current operating plan into 2019. There can be no assurance, however, that the current operating plan will be achieved in the timeframe anticipated by the Company, or that its cash resources will fund the Company's operating plan for the period anticipated by the Company, or if the Company needs additional funding that such funding will be available on terms acceptable to the Company, or at all.

2. Summary of significant accounting policies and basis of presentation

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial reporting and as required by Regulation S-X, Rule 10-01. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. For further information, refer to the consolidated financial statements and footnotes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 as filed with the Securities and Exchange Commission ("SEC"). These interim condensed consolidated financial statements, in the opinion of management, reflect all normal recurring adjustments necessary for a fair presentation of the Company's financial position and results of operations for the periods presented. Any reference in these notes to applicable guidance is meant to refer to the authoritative United States generally accepted accounting principles as found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

Principles of Consolidation

The unaudited interim consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries as disclosed in Note 2, Summary of Significant Accounting Policies, within the "Notes to Consolidated Financial Statements" accompanying its Annual Report on Form 10-K for the fiscal year ended December 31, 2016. Intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, the Company's management evaluates its estimates, which include, but are not limited to, estimates related to revenue recognition, accrued expenses, stock-based compensation expense, income taxes, and the fair value of common stock. The Company bases its estimates on historical experience and other market specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU 2014-09"). Subsequently, the FASB also issued ASU 2015-14, *Revenue from Contracts with Customers* (Topic 606), which adjusted the effective date of ASU 2014-09; ASU No. 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which amends the principal-versus-agent implementation guidance and illustrations in ASU 2014-09; ASU No. 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*, which clarifies identifying performance obligation and licensing implementation guidance and illustrations in ASU 2014-09; and ASU No. 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*, which addresses implementation issues and is intended to reduce the cost and complexity of applying the new revenue standard in ASU 2014-09 (collectively, the "Revenue ASUs").

The Revenue ASUs provide an accounting standard for a single comprehensive model for use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance. The accounting standard is effective for interim and annual periods beginning after December 15, 2017, with an option to early adopt for interim and annual periods beginning after December 15, 2016. The guidance permits two methods of adoption: retrospectively to each prior reporting period presented (the full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the modified retrospective method). The Company will adopt the Revenue ASUs effective January 1, 2018 and expects to utilize the modified retrospective methodology. As of June 30, 2017, revenue is generated exclusively from the Company's collaboration arrangement with Sanofi-Genzyme. The Company is currently evaluating the potential impact that ASU 2014-09 may have on its financial position and results of operations as it relates to this single arrangement. The adoption of the Revenue ASUs is expected to have a significant impact on the Company's notes to consolidated financial statements and its internal controls over financial reporting.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"), which simplifies several aspects of the accounting for employee share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification in the statement of cash flows. ASU 2016-09 is effective for annual reporting periods beginning after December 15, 2016, including interim periods within those annual reporting periods. The new standard was effective for the Company on January 1, 2017. Adoption of ASU 2016-09 did not have a material impact on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases* ("ASC 842"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will

determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similarly to existing guidance for operating leases today. ASC 842 supersedes the previous leases standard, ASC 840 Leases. The standard will be effective on January 1, 2019, with early adoption permitted. The Company is in the process of evaluating the impact that this new guidance will have on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* ("Topic 230"). The new standard clarifies certain aspects of the statement of cash flows, including the classification of contingent consideration payments made after a business combination and several other clarifications not currently applicable to the Company. The new standard also clarifies that an entity should determine each separately identifiable source or use within the cash receipts and cash payments on the basis of the nature of the underlying cash flows. In situations in which cash receipts and payments have aspects of more than one class of cash flows and cannot be separated by source or use, the appropriate classification should depend on the activity that is likely to be the predominant source or use of cash flows for the item. The new standard will be effective for the Company on January 1, 2018. The adoption of this standard is not expected to have a material impact on the Company's condensed consolidated statements of cash flows upon adoption.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows: Restricted Cash* ("ASU 2016-18"). The amendments in this update require that amounts generally described as restricted cash and restricted cash equivalents be included within cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 will be effective January 1, 2018, with early adoption permitted. As of June 30, 2017, the Company has not elected to early adopt this guidance, but expects the adoption to have an impact on its consolidated statement of cash flows as, upon adoption, it will include the Company's restricted cash balance in the cash and cash equivalents reconciliation of operating, investing and financing activities.

3. Fair Value Measurements

Assets and liabilities measured at fair value on a recurring basis as of June 30, 2017 and December 31, 2016 are as follows:

Assets	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
June 30, 2017		(in thousands)		
Money market funds included in cash and cash equivalents	$ 65,740	$ 65,740	$ —	$ —
Marketable securities:				
U.S. Treasury notes	75,023	75,023	—	—
Equity securities	1,480	1,480	—	—
Total marketable securities	$ 76,503	$ 76,503	$ —	$ —
Warrants to purchase equity securities	799	—	799	—
Total	$ 143,042	$ 142,243	$ 799	$ —
December 31, 2016				
Money market funds included in cash and cash equivalents	$ 36,003	$ 36,003	$ —	$ —
Marketable securities:				
U.S. Treasury notes	130,173	130,173	—	—
U.S. Government agency securities	7,604	—	7,604	—
Equity securities	1,360	1,360	—	—
Total marketable securities	$ 139,137	$ 131,533	$ 7,604	$ —
Warrants to purchase equity securities	792	—	792	—
Total	$ 175,932	$ 167,536	$ 8,396	$ —

The Company measures the fair value of money market funds, U.S. Treasuries and equity securities based on quoted prices in active markets for identical securities. The Level 2 debt securities include U.S. Government agency securities that are valued either based on recent trades of securities in inactive markets or based on quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data. The Level 2 equity securities include warrants used to purchase equity securities that are valued using the Black-Scholes model. The Black-Scholes option pricing model requires inputs based on certain subjective assumptions, including (a) the expected stock price volatility, (b) the calculation of expected term of the awards, (c) the risk-free interest rate, and (d) expected dividends. The assumptions utilized to value the warrants to purchase equity securities as of June 30, 2017 and December 31, 2016 are as follows:

	As of June 30, 2017	As of December 31, 2016
Risk-free interest rate	1.7 %	1.8 %
Expected dividend yield	— %	— %
Expected term (in years)	4.2	4.7
Expected volatility	92.9 %	97.5 %

The expected volatility is based on the historic volatility for the equity securities underlying the warrants and is calculated based on a period of time commensurate with the expected term assumption. The expected term is based on the remaining contractual life of the warrants on each measurement date. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected term of the warrants. The expected dividend yield is assumed to be zero as the entity that issued the warrants has never paid and has not indicated any intention to pay dividends.

4. Cash, Cash Equivalents, and Available for Sale Marketable Securities

Cash equivalents include all highly liquid investments maturing within 90 days from the date of purchase. Investments consist of securities with original maturities greater than 90 days when purchased. The Company classifies these investments as available-for-sale and records them at fair value in the accompanying condensed consolidated balance sheets. Unrealized gains or losses are included in accumulated other comprehensive income (loss). Premiums or discounts from par value are amortized to investment income over the life of the underlying investment.

The Company classifies marketable debt securities with a remaining maturity when purchased of greater than three months as available-for-sale. Marketable debt securities with a remaining maturity date greater than one year and marketable equity securities are classified as non-current where the Company has the intent and ability to hold these securities for at least the next 12 months. Available-for-sale debt securities are maintained by an investment manager and consist of U.S. Treasury securities and U.S. Government agency securities. During the third quarter in 2016, the Company invested in a supplier and received common stock and warrants to purchase common stock in that entity. The common stock is included in non-current marketable securities and the warrants are included in non-current assets.

All available-for-sale securities are carried at fair value with the unrealized gains and losses included in other comprehensive income (loss) as a component of stockholders' equity until realized. Any premium or discount arising at purchase is amortized and/or accreted to interest income and/or expense. Realized gains and losses are determined using the specific identification method and are included in other income (expense). If any adjustment to fair value reflects a decline in value of the investment, the Company considers all available evidence to evaluate the extent to which the decline is "other-than-temporary" and, if so, recognizes the unrealized loss through a charge to the Company's statement of operations and comprehensive loss. No other temporary losses have been recognized.

Cash, cash equivalents, and marketable securities included the following at June 30, 2017 and December 31, 2016:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
		(in thousands)		
As of June 30, 2017				
Money market funds included in cash and cash equivalents	$ 65,740	$ —	$ —	$ 65,740
Marketable securities:				
U.S. Treasury notes	75,071	—	48	75,023
Equity securities	1,220	260	—	1,480
Total marketable securities	$ 76,291	$ 260	$ 48	$ 76,503
Total money market funds and marketable securities	$ 142,031	$ 260	$ 48	$ 142,243
As of December 31, 2016				
Money market funds included in cash and cash equivalents	$ 36,003	$ —	$ —	$ 36,003
Marketable securities:				
U.S. Treasury notes	130,237	2	66	130,173
U.S. Government agency bonds	7,604	—	—	7,604
Total debt securities	$ 137,841	$ 2	$ 66	$ 137,777
Equity securities	1,220	140	—	1,360
Total marketable securities	$ 139,061	$ 142	$ 66	$ 139,137
Total money market funds and marketable securities	$ 175,064	$ 142	$ 66	$ 175,140

The estimated fair value of the Company's debt securities balance at June 30, 2017, by contractual maturity, is as follows:

Due in one year or less	$ 75,023

5. Accrued Expenses

Accrued expenses as of June 30, 2017 and December 31, 2016 consist of the following:

	As of June 30, 2017	As of December 31, 2016
	(in thousands)	
Research and development costs	$ 3,756	$ 2,384
Employee compensation costs	1,912	2,399
Professional services	898	698
Accrued goods and services	552	842
Other	116	76
Patent costs	80	89
Total	$ 7,314	$ 6,488

6. Commitments and Contingencies

Operating Leases

During March 2014, the Company entered into an agreement to lease its facility located at 75 Sidney Street under a non-cancelable operating lease that would expire on December 15, 2019. The lease contains escalating rent clauses which require higher rent payments in future years. The Company expenses rent on a straight-line basis over the term of the lease, including any rent-free periods.

In January 2016, the Company executed an amendment to extend the 75 Sidney Street lease and executed an agreement to lease the 64 Sidney Street facility until December 31, 2024. The additional facility includes laboratory and office space, and was ready for occupancy in early 2017. The table below includes estimated payments related to the amended 75 Sidney Street lease and the new lease for 64 Sidney Street through December 2024.

The Company received leasehold improvement incentives from the landlord totaling $1.3 million and $3.5 million for 75 Sidney Street and 64 Sidney Street, respectively. The Company recorded these incentives as a component of deferred rent and will amortize these incentives as a reduction of rent expense over the life of the lease. The leasehold improvements have been recorded as fixed assets.

The following table summarizes the Company's significant contractual obligations as of payment due date by period at June 30, 2017:

	Total Minimum Lease Payments
	(in thousands)
2017	$ 1,610
2018	3,290
2019	3,382
2020	3,762
2021	3,868
2022+	12,273
	$ 28,185

Significant Agreements

Sanofi-Genzyme Collaboration Agreement

Summary of Agreement

In February 2015, the Company entered into an agreement with Sanofi-Genzyme ("Collaboration Agreement"), which included a non-refundable upfront payment of $65.0 million. In addition, contemporaneous with entering into the Collaboration Agreement, Sanofi-Genzyme entered into a Series B Stock Purchase Agreement, under which Sanofi-Genzyme purchased 10,000,000 shares of Series B Preferred Stock for $30.0 million. The fair value of the Series B Preferred Stock at the time of issuance was approximately $25.0 million. The $5.0 million premium over the fair value is accounted for as additional consideration under the Collaboration Agreement.

Under the Collaboration Agreement, the Company granted Sanofi-Genzyme an exclusive option to license, develop and commercialize (i) ex-U.S. rights to the following programs, which are referred to as Split Territory Programs; VY-AADC01 ("Parkinson's Program"), VY-FXN01 ("Friedreich's Ataxia Program"), a future program to be designated by Sanofi-Genzyme ("Future Program") and VY-HTT01 ("Huntington's Program") with an incremental option to co-commercialize VY-HTT01 in the United States and (ii) worldwide rights to VY-SMN101 ("Spinal Muscular Atrophy Program"). Sanofi-Genzyme's option for the Split Territory Programs and the Spinal Muscular Atrophy Program is triggered following the completion of the first proof-of-principle human clinical study ("POP Study"), on a program-by-program basis.

Prior to any option exercise by Sanofi-Genzyme, the Company will collaborate with Sanofi-Genzyme in the development of products under each Split Territory Program and the Spinal Muscular Atrophy Program pursuant to a written development plan and under the guidance of an Alliance Joint Steering Committee ("AJSC"), comprised of an equal number of employees from the Company and Sanofi-Genzyme.

The Company is required to use commercially reasonable efforts to develop products under each Split Territory Program and the Spinal Muscular Atrophy Program through the completion of the applicable POP Study. During the development of these joint programs, the activities are guided by a Development Advisory Committee ("DAC"). The DAC may elect to utilize certain Sanofi-Genzyme technology relating to the Parkinson's Program, the Huntington's Program, or generally with the manufacture of Split Territory Program products.

The Company is solely responsible for all costs incurred in connection with the development of the Split Territory Programs and the Spinal Muscular Atrophy Program products prior to the exercise of an option by Sanofi-Genzyme except that, at the Company's request and upon mutual agreement, Sanofi-Genzyme will provide "in-kind" services valued at up to $5.0 million.

Other than the Parkinson's Program (for which a POP Study has already commenced), if the Company does not initiate a POP Study for a given Split Territory Program by December 31, 2026 (or for the Future Program by the tenth anniversary of the date the Future Program is nominated by Sanofi-Genzyme), and Sanofi-Genzyme has not terminated the Collaboration Agreement with respect to the collaboration program, then Sanofi-Genzyme shall be entitled, as its sole and exclusive remedy, to a credit of $10.0 million for each such program against other milestone or royalty payments payable by Sanofi-Genzyme under the Collaboration Agreement. However, if the POP Study is not initiated due to a regulatory delay or a force majeure event, such time period shall be extended for so long as such delay continues.

With the exception of the Parkinson's Program, Sanofi-Genzyme is required to pay an option exercise payment of $20.0 million or $30.0 million for each Split Territory Program, as well as the Spinal Muscular Atrophy Program.

Upon Sanofi-Genzyme's exercise of its option to license a given product in a Split Territory Program ("Split Territory Licensed Product"), the Company will have sole responsibility for the development of such Split Territory Licensed Product in the United States and Sanofi-Genzyme shall have sole responsibility for development of such Split Territory Licensed Product in the rest of the world. The Company and Sanofi-Genzyme will have shared responsibility for execution of ongoing development of such Split Territory Licensed Product that is not specific to either territory, including costs associated therewith. The Company is responsible for all commercialization activities relating to Split

Territory Licensed Products in the United States, including all of the associated costs. Sanofi-Genzyme is responsible for all commercialization activities relating to the Split Territory Licensed Products in the rest of the world, including all of the associated costs. If Sanofi-Genzyme exercises its co-commercialization rights for the Huntingtons' Program product ("Huntington's Licensed Product"), Sanofi-Genzyme will be the lead party responsible for all commercialization activities related to such product in the United States.

Upon exercise of the option, Sanofi-Genzyme shall have the sole right to develop the licensed product from the Spinal Muscular Atrophy Program (the "Spinal Muscular Atrophy Licensed Product") worldwide. Sanofi-Genzyme shall be responsible for all of the development costs that occur after the option exercise date for the Spinal Muscular Atrophy Program. Sanofi-Genzyme is also responsible for commercialization activities relating to the Spinal Muscular Atrophy Licensed Product worldwide.

Sanofi-Genzyme is required to pay the Company for specified regulatory and commercial milestones, if achieved, up to $645.0 million across all programs. The regulatory approval milestones are payable upon either regulatory approval in the United States or regulatory and reimbursement approval in the European Union and range from $40.0 million to $50.0 million per milestone, with an aggregate total of $265.0 million. The commercial milestones are payable upon achievement of specified annual net sales in each program and range from $50.0 million to $100.0 million per milestone, with an aggregate total of $380.0 million.

In addition, to the extent any Split Territory Licensed Products or the Spinal Muscular Atrophy Licensed Product are commercialized, the Company is entitled to tiered royalty payments ranging from the mid-single digits to mid-teens based on a percentage of net sales by Sanofi-Genzyme. Sanofi-Genzyme is entitled to receive tiered royalty payments related to sales of Split Territory Licensed Product ranging from the low-single digits to mid-single digits based on a percentage of net sales by the Company depending on whether the Company uses Sanofi-Genzyme technology in the Split Territory Licensed Product. If Sanofi-Genzyme elects to co-commercialize the Huntington's Licensed Product in the United States, the Company and Sanofi-Genzyme will share in any profits or losses from sales of such product.

The Collaboration Agreement will continue in effect until the later of (i) the expiration of the last to expire of the option rights and (ii) the expiration of all payment obligations unless sooner terminated by the Company or Sanofi-Genzyme. The Company and Sanofi-Genzyme have customary termination rights including the right to terminate for an uncured material breach of the agreement committed by the other party and Sanofi-Genzyme has the right to terminate for convenience.

Accounting Analysis

The Collaboration Agreement includes the following deliverables: (i) research and development services for each of the Split Territory License Programs and the Spinal Muscular Atrophy Program, (ii) participation in the AJSC, (iii) participation in the DAC and (iv) the option to obtain a development and commercial license in the Parkinson's Program and related deliverables. The Company has determined that the option to obtain a development and commercial license in the Parkinson's Program is not a substantive option for accounting purposes, primarily because there is no additional option exercise payment payable by Sanofi-Genzyme at the time the option is exercised. Therefore, the option to obtain a license and other obligations of the Company that are contingent upon exercise of the option are considered deliverables at the inception of the arrangement. The options in the other Split Territory Programs and the Spinal Muscular Atrophy Program are considered substantive as there are substantial option exercise payments payable by Sanofi-Genzyme upon exercise. In addition, as a result of the uncertainties related to the discovery, research, development and commercialization activities, the Company is at risk with regard to whether Sanofi-Genzyme will exercise the options. Moreover, the substantive options are not priced at a significant incremental discount. Accordingly, the substantive options are not considered deliverables at the inception of the arrangement and the associated option exercise payments are not included in allocable arrangement consideration. The Company has also determined that any obligations which are contingent upon the exercise of a substantive option are not considered deliverables at the outset of the arrangement, as these deliverables are contingent upon the exercise of the options. In addition, any option exercise payments associated with the substantive options are not included in the allocable arrangement consideration.

The Company has concluded that each of the deliverables identified at the inception of the arrangement has standalone value from the other undelivered elements. Additionally, the Collaboration Agreement does not include return rights related to the initial collaboration term. Accordingly, each deliverable qualifies as a separate unit of accounting.

The Company has identified $79.3 million of allocable arrangement consideration consisting of the $65.0 million upfront fee, the $5.0 million premium paid in excess of fair value of the Series B Preferred Stock and $9.3 million of Sanofi-Genzyme “in-kind” and other funding.

The Company has allocated the allocable arrangement consideration based on the relative selling price of each unit of accounting. For all units of accounting, the Company determined the selling price using the best estimate of selling price (“BESP”). The Company determined the BESP for the service related deliverable for the research and development activities based on internal estimates of the costs to perform the services, including expected internal expenses and expenses with third parties for services and supplies, marked up to include a reasonable profit margin and adjusted for the scope of the potential license. Significant inputs used to determine the total expense of the research and development activities include, the length of time required and the number and costs of various studies that will be performed to complete the applicable POP Study. The BESP for the AJSC and DAC have been estimated based on the costs incurred to participate in the committees, marked up to include a reasonable profit margin. The BESP for the license option was determined based on the estimated value of the license and related deliverables adjusted for the estimated probability that the option would be exercised by Sanofi-Genzyme.

Based on the relative selling price allocation, the allocable arrangement consideration was allocated as follows:

Unit of Accounting	Amount (in thousands)
Research and Development Services for:	
Huntington’s Program	$ 15,662
Parkinson’s Program	6,648
Friedreich’s Ataxia Program	16,315
Spinal Muscular Atrophy Program	32,050
Future Program	2,464
Committee Obligations:	
AJSC	147
DAC	227
License Option and related deliverables	5,743
Total	$ 79,256

The Company recognizes the amounts associated with research and development services on a straight-line basis over the estimated period of service as there is no discernable pattern or objective measure of performance for the services. Similarly, the Company recognizes the amount associated with the committee obligations on a straight-line basis over the period of service consistent with the expected pattern of performance. The amounts allocated to the license option will be deferred until the option is exercised. The revenue recognition upon option exercise will be determined based on whether the license has standalone value from the remaining deliverables at the time of exercise.

During 2016, the Company reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for two units of accounting. Additionally, the Company and Sanofi-Genzyme agreed to deprioritize the development of the Spinal Muscular Atrophy Licensed Product and reduce the estimates related to the amount of “in-kind” services that would be provided by Sanofi-Genzyme. These adjustments were made on a prospective basis and resulted in decreases in revenue recognized by $2.4 million per quarter.

During the first quarter of 2017, the Company reassessed the estimated period of performance for each of its units of accounting and, based on then current facts and circumstances, determined that the estimated period would be extended for two units of accounting. This adjustment was made on a prospective basis and resulted in a decrease in revenue recognized by $0.4 million per quarter. During the second quarter of 2017, the Company reassessed the estimated period of performance for each of its units of accounting and, based on then current facts and circumstances,

determined that the estimated period would be extended for three units of accounting. This adjustment was made on a prospective basis and will result in a decrease in revenue recognized by $0.1 million per quarter.

The Company has evaluated all of the milestones that may be received in connection with each Split Territory Licensed Product and the Spinal Muscular Atrophy Licensed Product. In evaluating if a milestone is substantive, the Company assesses whether: (i) the consideration is commensurate with either the Company's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the Company performance to achieve the milestone, (ii) the consideration relates solely to past performance and (iii) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. All regulatory milestones are considered substantive on the basis of the contingent nature of the milestone, specifically reviewing factors such as the scientific, clinical, regulatory, and other risks that must be overcome to achieve the milestone as well as the level of effort and investment required. Accordingly, such amounts will be recognized as revenue in full in the period in which the associated milestone is achieved, assuming all other revenue recognition criteria are met. All commercial milestones will be accounted for in the same manner as royalties and recorded as revenue upon achievement of the milestone, assuming all other revenue recognition criteria are met.

During the three and six months ended June 30, 2017, the Company recognized $1.2 million and $2.6 million, respectively, of revenue associated with its collaboration with Sanofi-Genzyme related to research and development services performed during the periods. As of June 30, 2017, there is $39.1 million of deferred revenue related to the Collaboration Agreement, which is classified as either current or noncurrent in the accompanying consolidated balance sheet based on the period the services are expected to be delivered.

Costs incurred relating to the programs that Sanofi-Genzyme has the option to license under the Collaboration Agreement consist of internal and external research and development costs, which primarily include: salaries and benefits, lab supplies and preclinical research studies. The Company does not separately track or segregate the amount of costs incurred under the Collaboration Agreement. These costs are included in research and development expenses in the Company's statement of operations during the three and six months ended June 30, 2017. The Company estimates that the majority of research and development expense during the period relate to programs for which Sanofi-Genzyme has an option right.

MRI Interventions License and Securities Purchase Agreements

In September 2016, the Company entered into Securities Purchase and License agreements with MRI Interventions, Inc. ("MRIC"). MRIC is the primary supplier of the ClearPoint System, which is being used by the Company in ongoing development and clinical trials. Under the Securities Purchase Agreement, the Company paid $2.0 million for shares of MRIC common stock and a warrant to purchase additional shares of MRIC common stock. The License Agreement provides for certain rights to MRIC technology, and for MRIC to transfer the rights and know-how to manufacture the ClearPoint System, in order to enable the Company to utilize an alternative supplier for the ClearPoint System for use in the Company's development and clinical trials.

During the three months ended March 31, 2017, the Company terminated the License Agreement with MRIC and all prior and future commitments and obligations under such agreement became null and void. The Company continues to hold the common stock and warrants to purchase additional shares of common stock as an available-for-sale security and non-current asset, respectively.

Other Agreements

During September 2016, the Company entered into a research and development funding arrangement with a non-profit organization that provides up to $4.0 million in funding upon the achievement of clinical and development milestones. The agreement provides that the Company repay amounts received under certain circumstances including termination of the agreement, and to pay an amount up to 2.6 times the funding received upon successful development and commercialization of any products developed. During the three months ended March 31, 2017, the Company earned a milestone payment of $1.0 million. No milestone payments were earned in the three months ended June 30, 2017. The Company has evaluated the arrangement and has concluded that it represents a research and development financing arrangement as it is probable that the Company will repay amounts received under the arrangement. As a result, the $1.0 million earned to date is recorded as a long-term liability in the accompanying balance sheet.

Litigation

The Company is not a party to any litigation and does not have contingency reserves established for any litigation liabilities as of June 30, 2017 or December 31, 2016.

7. Redeemable Convertible Preferred Stock

The Company has authorized preferred stock amounting to 5,000,000 shares as of June 30, 2017 and December 31, 2016. The authorized preferred stock was classified under stockholders' equity at June 30, 2017 and December 31, 2016.

8. Stock-Based Compensation

2015 Stock Option Plan

In October 2015, the Company's board of directors and stockholders approved the 2015 Stock Option and Incentive Plan, or 2015 Stock Option Plan, which became effective upon the completion of the IPO. The 2015 Stock Option Plan provides the Company with the flexibility to use various equity-based incentive and other awards as compensation tools to motivate its workforce. These tools include stock options, stock appreciation rights, restricted stock, restricted stock units, unrestricted stock, performance share awards and cash-based awards. The 2015 Stock Option Plan replaced the Voyager Therapeutics, Inc. 2014 Stock Option and Grant Plan, or the 2014 Plan. Any options or awards outstanding under the 2014 Plan remained outstanding and effective. The number of shares initially reserved for issuance under the 2015 Stock Option Plan is the sum of (i) 1,311,812 shares of common stock and (ii) the number of shares under the 2014 Plan that are not needed to fulfill the Company's obligations for awards issued under the 2014 Plan as a result of forfeiture, expiration, cancellation, termination or net issuances of awards thereunder. The number of shares of common stock that may be issued under the 2015 Stock Option Plan is also subject to increase on the first day of each fiscal year by up to 4% of the Company's issued and outstanding shares of common stock on the immediately preceding December 31.

Effective January 1, 2016 and 2017, an additional 1,069,971 and 1,070,635 shares, respectively, were added to the Company's 2015 Stock Option Plan for future issuance. As of June 30, 2017, there were 1,851,345 shares of common stock available for future award grants under the 2015 Stock Option Plan. During the three and six months ended June 30, 2017, the Company issued a total of 211,700 and 1,255,500 stock options, respectively, to employees and directors under the 2015 Stock Option Plan. There were no new stock options issued to non-employees under the 2015 Stock Option Plan during the three and six months ended June 30, 2017.

The terms of stock awards agreements, including vesting requirements, are determined by the Board of Directors and are subject to the provisions of the 2015 Stock Option Plan.

2014 Stock Option and Grant Plan

In January 2014, the Company adopted the 2014 Plan, under which it may grant incentive stock options, non-qualified stock options, restricted stock awards, unrestricted stock awards, or restricted stock units to purchase up to 823,529 shares of common stock to employees, officers, directors and consultants of the Company.

In April 2014, the Company amended the 2014 Plan to allow for the issuance of up to 1,411,764 shares of common stock. In August 2014, April 2015, August 2015, and October 2015, the Company further amended the 2014 Plan to allow for the issuance of up to 2,000,000, 2,047,058, 2,669,411, and 2,998,823 shares of common stock, respectively. During 2014 the Company issued only restricted stock awards under the 2014 Plan and during 2015 the Company only granted stock options.

Founder Awards

In January 2014, the Company issued 1,188,233 shares of restricted stock to its founders at an original issuance price of $0.0425 per share. Of the total restricted shares awarded to the founders, 835,292 shares generally vest over one to four years, based on each founder's continued service to the Company in varying capacity as a Scientific Advisory Board member, consultant, director, officer or employee, as set forth in each grantee's individual restricted stock purchase agreement. The remaining 352,941 of the shares issued will begin vesting upon the achievement of certain performance objectives as well as continued service to the Company, as set forth in the agreements.

These performance conditions are tied to certain milestone events specific to the Company's corporate goals, including but not limited to preclinical and clinical development milestones related to the Company's product candidates. Stock-based compensation expense associated with these performance-based awards is recognized when the achievement of the performance condition is considered probable, using management's best estimates. During 2016, management determined that the achievement of the performance milestone for one of the three performance-based awards had become probable and began recognizing stock-based compensation accordingly. The Company recorded a reduction of $0.3 million in stock-based compensation expense related to this award during the three months ended June 30, 2017. The Company recorded $0.9 million in stock-based compensation expense related to this award during the six months ended June 30, 2017. No stock-based compensation expense was recorded for the remaining two founders' awards with performance-based vesting as of June 30, 2017 as the performance-based milestones related to these awards were not probable.

2015 Employee Stock Purchase Plan

In October 2015, the Company's board of directors and stockholders approved the 2015 Employee Stock Purchase Plan, or the 2015 ESPP. Under the 2015 ESPP, all full-time employees of the Company are eligible to purchase common stock of the Company twice per year, at the end of each six-month payment period. During each payment period, eligible employees who so elect, may authorize payroll deductions in an amount of 1% to 10% (whole percentages only) of the employee's base pay for each payroll period. At the end of each payment period, the accumulated deductions are used to purchase shares of common stock from the Company at a discount. A total of 262,362 shares of common stock were initially authorized for issuance under this plan. The 2015 ESPP became effective upon the completion of the IPO. Effective January 1, 2016 and 2017, 267,492 and 267,658 shares of common stock, respectively, were added to the 2015 ESPP.

Stock-Based Compensation Expense

Total compensation cost recognized for all stock-based compensation awards in the statements of operations and comprehensive loss is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Research and development	$ 617	$ 931	$ 1,875	$ 2,048
General and administrative	921	387	1,829	691
Total stock compensation expense	$ 1,538	$ 1,318	$ 3,704	$ 2,739

Restricted Stock

A summary of the status of and changes in unvested restricted stock unit activity under the Company's equity award plan was as follows:

	Shares	Weighted Average Grant Date Fair Value Per Share
Unvested restricted common stock as of December 31, 2016	1,167,984	$ 0.76
Issued	—	—
Vested	(277,955)	$ 0.79
Repurchased	(26,594)	$ 0.51
Unvested restricted common stock as of June 30, 2017	863,435	$ 0.73

The expense related to awards granted to employees and non-employees was $0.1 million and $29.0 thousand, respectively, for the three months ended June 30, 2017, and $0.2 million and $0.7 million for the six months ended June 30, 2017, respectively. The expense related to awards granted to employees and non-employees was $0.1 million and $0.5 million, respectively, for the three months ended June 30, 2016, and $0.3 million and $1.2 million for the six months ended June 30, 2016, respectively.

As of June 30, 2017, the Company had unrecognized stock-based compensation expense related to its unvested restricted stock unit awards of $4.7 million, which is expected to be recognized over the remaining average vesting period of 0.9 years.

Stock Options

The following is a summary of stock option activity for the six months ended June 30, 2017:

	Shares	Weighted Average Exercise Price	Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2016	1,871,237	$ 10.21		
Granted	1,255,500	$ 11.51		
Exercised	(97,740)	$ 8.43		
Cancelled or forfeited	(184,442)	$ 10.08		
Outstanding at June 30, 2017	2,844,555	$ 10.85	8.9	$ 622
Exercisable at June 30, 2017	717,686	$ 10.13	8.3	$ 320
Vested and expected to vest at June 30, 2017	2,844,555	$ 10.85	8.9	$ 622

Using the Black-Scholes option pricing model, the weighted average fair value of options granted to employees and directors during the three and six months ended June 30, 2017 was $6.26 and $7.55 per share, respectively. The expense related to awards granted to employees and directors was $1.3 million and $2.5 million for the three and six months ended June 30, 2017, respectively. The weighted average fair value of options granted to employees and directors during the three and six months ended June 30, 2016 was $8.27 and $7.48 per share, respectively. The expense related to awards granted to employees and directors was $0.7 million and $1.2 million for the three and six months ended June 30, 2016, respectively.

The fair value of each option issued to employees and directors was estimated at the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Risk-free interest rate	1.9 %	1.3 %	2.0 %	1.5 %
Expected dividend yield	— %	— %	— %	— %
Expected term (in years)	6.0	6.0	6.0	6.0
Expected volatility	75.9 %	73.5 %	74.0 %	73.1 %

There were no new options granted to non-employees during the three and six months ended June 30, 2017. Unvested options granted to non-employees are revalued at each measurement period until fully vested. The expense related to awards granted to non-employees was $0.1 million and $0.3 million for the three and six months ended June 30, 2017, respectively. The weighted average grant date fair value of options granted to non-employees during the six months ended June 30, 2016 was $7.10 per share. The expense related to awards granted to non-employees was $42.0 thousand and $0.1 million the three and six months ended June 30, 2016, respectively.

The fair value of each option issued to non-employees was estimated at each vesting and reporting date using the Black-Scholes option pricing model. The reporting date fair value was determined using the following weighted-average assumptions:

	As of June 30,	
	2017	2016
Risk-free interest rate	2.0 %	1.5 %
Expected dividend yield	— %	— %
Expected term (in years)	8.5	10.0
Expected volatility	78.4 %	84.1 %

As of June 30, 2017, the Company had unrecognized stock-based compensation expense related to its unvested stock options of $14.5 million which is expected to be recognized over the remaining weighted average vesting period of 2.9 years.

For the three and six months ended June 30, 2017 and 2016, expected volatility was estimated using the historical volatility of the common stock of a peer group of publicly-traded companies that are similarly situated to the Company. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

9. Income taxes

Deferred tax assets and deferred tax liabilities are recognized based on temporary differences between the financial reporting and tax basis of assets and liabilities using statutory rates. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized. Due to the uncertainty surrounding the realization of the favorable tax attributes in future tax returns, the Company has recorded a full valuation allowance against the Company's otherwise recognizable net deferred tax assets.

For the six months ended June 30, 2017, the Company recognized a tax expense in other comprehensive income of $0.1 million related to the unrealized gain on available-for-sale securities.

10. Net Loss Per Share

The following table sets forth the outstanding potentially dilutive securities that have been excluded in the calculation of diluted net loss per share because to do so would be anti-dilutive (in common stock equivalent shares):

	As of June 30,	
	2017	2016
Unvested restricted common stock	863,435	1,450,352
Outstanding stock options	2,844,555	1,783,951
Total	3,707,990	3,234,303

11. Related-Party Transactions

During the three and six months ended June 30, 2017 and 2016, the Company received consulting and management services from one of its investors. The total amount of consulting and management services provided by this investor was approximately $7.8 thousand and $16.9 thousand during the three and six months ended June 30, 2017, respectively. The total amount of services provided by this investor was approximately $16.0 thousand and $19.0 thousand during the three and six months ended June 30, 2016, respectively. As of June 30, 2017, the Company had a liability of $18.9 thousand related to consulting and management service fees charged by this investor.

During the three and six months ended June 30, 2017, the Company recognized $1.2 million and $2.6 million, respectively, of revenue associated with the Collaboration Agreement related to research and development services provided during this period. During the three and six months ended June 30, 2016, the Company recognized $3.7 million and $8.6 million, respectively, of revenue associated with the Collaboration Agreement related to research and development services provided during the period. The Company also recognized $68.4 thousand and $0.1 million of expense during the three and six months ended June 30, 2017, respectively, related to "in-kind" services provided by Sanofi-Genzyme associated with the Collaboration Agreement. The Company recognized $0.3 million and $0.8 million of expense during the three and six months ended June 30, 2016, respectively, related to "in-kind" services provided by Sanofi-Genzyme under the Collaboration Agreement.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q, our unaudited condensed consolidated financial statements and related notes in our Quarterly Report on Form 10-Q, which was filed with the Securities and Exchange Commission, or SEC, on May 9, 2017, and the audited financial information and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the SEC on March 15, 2017.

Our actual results and timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this Quarterly Report on Form 10-Q. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate are consistent with the forward-looking statements contained in this Quarterly Report on Form 10-Q, they may not be predictive of results or developments in future periods.

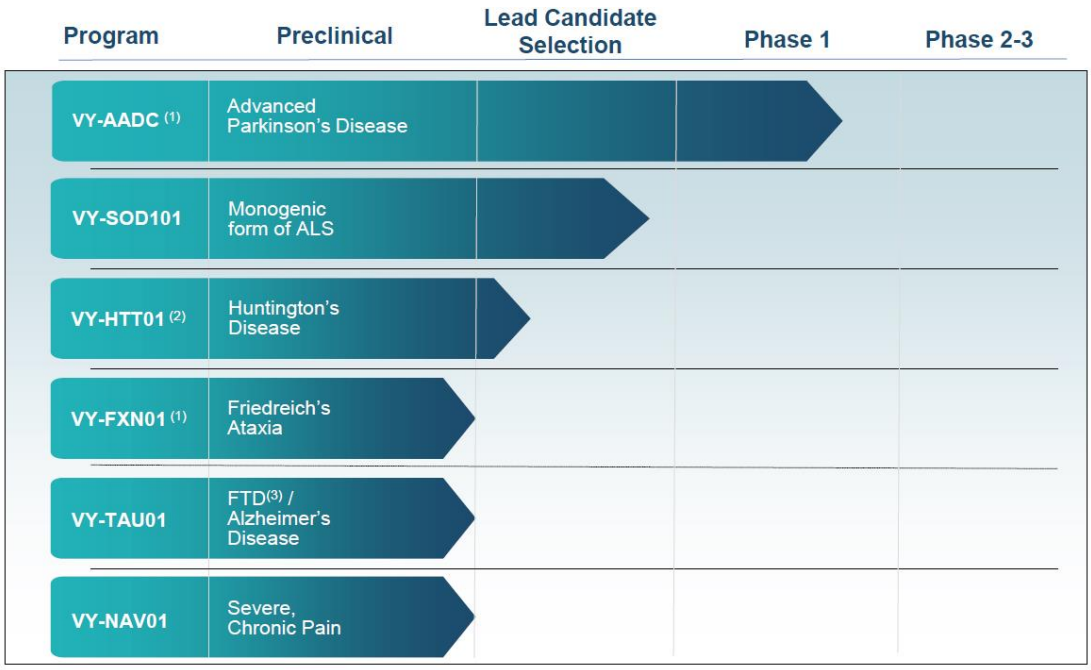
The following information and any forward-looking statements should be considered in light of factors discussed elsewhere in the Quarterly Report on Form 10-Q, including those risks identified under Part II, Item 1A. Risk Factors.

These forward-looking statements and are made under the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements are neither promises nor guarantees. We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Overview

We are a clinical-stage gene therapy company focused on developing life-changing treatments for patients suffering from severe neurological diseases. We focus on neurological diseases where we believe an adeno-associated virus, or AAV, gene therapy approach that either increases or decreases the production of a specific protein can slow or reduce the symptoms experienced by patients, and therefore have a clinically meaningful impact. We have built a product engine, that we believe positions us to be the leading company at the intersection of AAV gene therapy and severe neurological disease. Our product engine enables us to engineer, optimize, manufacture and deliver our AAV-based gene therapies that have the potential to provide durable efficacy following a single administration. Our team of experts in the fields of AAV gene therapy and neuroscience first identifies and selects severe neurological diseases that are well-suited for treatment using AAV gene therapy. We then engineer and optimize AAV vectors for delivery to the targeted tissue or cells. Our manufacturing process employs an established system to enable production of high quality AAV vectors at commercial-scale. Finally, we leverage established routes of administration and advances in dosing techniques to optimize delivery of our AAV gene therapies directly to discrete regions of the brain, more broadly to the spinal cord region, and to target cells that are critical to the disease of interest. In November 2016, we elected to deprioritize the development of VY-SMN101 for spinal muscular atrophy due to, among other things, the progress we have made in our other preclinical programs and the evolving competitive landscape.

Our pipeline of gene therapy programs is summarized in the table below:



(1) Sanofi Genzyme has ex-U.S. options, (2) Sanofi Genzyme has ex-U.S. options and option to co-promote in the U.S. (3) FTD = Frontotemporal Dementia

Since our inception, our operations have focused on building our team, business planning, raising capital, establishing our intellectual property portfolio, determining which neurological diseases to pursue, advancing our product engine including (delivery and manufacturing), and conducting preclinical studies and clinical trials. We do not have any product candidates approved for sale and have not generated any revenue from product sales.

We have incurred significant operating losses since our inception. Our net losses were $35.5 million for the six months ended June 30, 2017. As of June 30, 2017, we had an accumulated deficit of $125.5 million. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- continue investing in our product engine to optimize vector engineering, manufacturing and dosing and delivery techniques;
- continue development of our clinical candidate, VY-AADC02;
- initiate additional preclinical studies and clinical trials for our other programs;
- continue our process research and development activities, as well as establish our research grade and commercial manufacturing capabilities;
- identify additional neurological diseases for treatment with our AAV gene therapies;
- seek marketing approvals for VY-AADC or other product candidates that arise from our programs that successfully complete clinical trials;

- develop a sales, marketing and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio; and
- identify, acquire or in license other product candidates and technologies.

Financial Operations Overview

Collaboration Revenue

To date, we have not generated any revenue from product sales and do not expect to generate any revenue from product sales for the foreseeable future. For the six months ended June 30, 2017, we recognized $2.6 million of collaboration revenue from the Sanofi-Genzyme Collaboration.

For the foreseeable future, we expect substantially all of our revenue will be generated from the Sanofi-Genzyme Collaboration, and any other strategic relationships we may enter into. If our development efforts are successful, we may also generate revenue from product sales.

Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our program discovery efforts, and the development of our programs and product engine, which include:

- employee related expenses including salaries, benefits, and stock-based compensation expense;
- costs of funding research performed by third parties that conduct research and development, clinical and preclinical activities, manufacturing, devices, and production on our behalf;
- the cost of purchasing lab supplies and non-capital equipment used in designing, developing, and manufacturing preclinical study materials;
- the cost of consulting services by external experts and related fees;
- facility costs including rent, depreciation, and maintenance expenses; and
- fees for maintaining licenses under our third-party licensing agreements.

Research and development costs are expensed as incurred. Costs for certain activities such as manufacturing, preclinical studies, and clinical trials, are generally recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and collaborators.

At this time, we cannot reasonably estimate or know the nature, timing, and estimated costs of the efforts that will be necessary to complete the development of our product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from sales of our product candidates. This is due to the numerous risks and uncertainties associated with developing such product candidates, including the uncertainty of:

- successful enrollment in and completion of clinical trials;
- establishing an appropriate safety profile and efficacy;

- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- receipt of marketing approvals from applicable regulatory authorities;
- commercializing our product candidates, if and when approved, whether alone or in collaboration with others;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- continued acceptable safety profiles of the products following approval; and
- retention of key research and development personnel.

A change in the outcome of any of these variables with respect to the development of any of our product candidates would significantly change the costs, timing, and viability associated with the development of that product candidate.

Research and development activities are central to our business model. We expect research and development costs to increase significantly for the foreseeable future as our development programs progress, including as we continue to support the Phase 1b clinical trial of VY-AADC01 as a treatment for advanced Parkinson's disease, and move VY-AADC02 into additional clinical trials. There are numerous factors associated with the successful commercialization of any of our product candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development. Additionally, future commercial and regulatory factors beyond our control will impact our clinical development programs and plans.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation for personnel in executive, finance, accounting, business development, legal, and human resource functions. Other significant costs include corporate facility costs not otherwise included in research and development expenses, legal fees related to patent and corporate matters, and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support continued research and development activities, including the continuation of the Phase 1b clinical trial of VY-AADC01, and the initiation of our clinical trials for our other product candidates. These increases will likely include increased costs related to the hiring of additional personnel and fees paid to outside consultants. We also anticipate increased expenses in comparison to general and administrative expenses of the prior year, resulting from costs associated with being a public company including audit, legal, regulatory, and tax-related services, director and officer insurance premiums, and investor relations costs.

Critical Accounting Policies and Estimates

We have prepared our financial statements in accordance with U.S. generally accepted accounting principles. Our preparation of these financial statements requires us to make estimates, assumptions, and judgments that affect the reported amounts of assets, liabilities, expenses, and related disclosures at the date of the financial statements, as well as revenue and expenses recorded during the reporting periods. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on 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 could therefore differ materially from these estimates under different assumptions or conditions.

There have been no material changes to our critical accounting policies from those described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the SEC on March 15, 2017.

Results of Operations

Comparison of the three months ended June 30, 2017 and 2016

The following table summarizes our results of operations for the three months ended June 30, 2017 and 2016, together with the changes in those items in dollars:

	Three Months Ended June 30,		
	2017	2016	Change
	(in thousands)		
Collaboration revenue	$ 1,177	$ 3,720	$ (2,543)
Operating expenses:			
Research and development	15,300	10,484	4,816
General and administrative	4,516	2,854	1,662
Total operating expenses	19,816	13,338	6,478
Other income (expense), net:			
Interest income, net	255	433	(178)
Other expense, net	(297)	(150)	(147)
Total other income (expense), net	(42)	283	(325)
Loss before income taxes	(18,681)	(9,335)	(9,346)
Income tax provision	(195)	—	(195)
Net loss	$ (18,876)	$ (9,335)	$ (9,541)

Collaboration Revenue

Collaboration revenue was $1.2 million and $3.7 million for the three months ended June 30, 2017 and June 30, 2016, respectively, all of which related to the Sanofi-Genzyme Collaboration for research and development services for various programs under the Collaboration Agreement.

During 2016 we reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for two units of accounting. Additionally, we and Sanofi-Genzyme agreed to deprioritize the development of the Spinal Muscular Atrophy Licensed Product and reduce the estimates related to the amount of "in-kind" services that would be provided by Sanofi-Genzyme. These adjustments were made on a prospective basis and resulted in decreases in revenue recognized by $2.4 million per quarter.

During the first quarter of 2017, we reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for two units of accounting. This adjustment was made on a prospective basis and resulted in decreases in revenue recognized by $0.4 million per quarter. During the second quarter of 2017, we reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for three units of accounting. This adjustment was made on a prospective basis and will result in decreases in revenue recognized by $0.1 million per quarter.

Research and Development Expense

Research and development expense increased by $4.8 million from $10.5 million for the three months ended June 30, 2016, to $15.3 million for the three months ended June 30, 2017. The following table summarizes our research and development expenses for the three months ended June 30, 2017 and 2016:

	Three Months Ended June 30,		
	2017	2016	Change
	(in thousands)		
Research and development expenses	$ 8,299	$ 5,363	$ 2,936
Employee and contractor related expenses	4,800	3,645	1,155
Facility and other expenses	1,886	1,382	504
License fees	315	94	221
Total research and development expenses	$ 15,300	$ 10,484	$ 4,816

The increase in research and development expense for the three months ended June 30, 2017 was primarily attributable to the following:

- approximately $2.8 million for increased costs of funding research performed by third parties that conduct research and development, preclinical and clinical activities, and manufacturing and production preparation activities on our behalf, and increased purchases of lab supplies and non-capital equipment used in designing, developing, and manufacturing preclinical study materials, and an additional expense of approximately $0.1 million attributable to "in-kind" research and development services incurred by Sanofi-Genzyme and provided to us under the Sanofi-Genzyme Collaboration Agreement;

- approximately $1.2 million for increases in employee compensation cost due to increases in headcount; and

- approximately $0.5 million for increases in facilities and other costs including rent, depreciation, maintenance and other expenses.

General and Administrative Expense

General and administrative expense increased by $1.6 million from $2.9 million for the three months ended June 30, 2016 to $4.5 million for the three months ended June 30, 2017. The increase in general and administrative expense was primarily attributable to the following:

- approximately $0.8 million for increases in employee compensation cost due to increases in headcount; and

- approximately $0.7 million for increases in facilities and other costs including rent, depreciation, maintenance, and other expenses.

Other Income (Expense)

Interest income of approximately $0.3 million was recognized during the three months ended June 30, 2017 resulting from our marketable securities balances. The balance was offset by a $0.3 million net loss related to mark-to-market losses recognized on the fair value of warrants to purchase equity securities.

Comparison of the six months ended June 30, 2017 and 2016

The following table summarizes our results of operations for the six months ended June 30, 2017 and 2016, together with the changes in those items in dollars:

	Six Months Ended June 30,		
	2017	2016	Change
	(in thousands)		
Collaboration revenue	$ 2,642	$ 8,550	$ (5,908)
Operating expenses:			
Research and development	29,372	19,216	10,156
General and administrative	9,430	6,419	3,011
Total operating expenses	38,802	25,635	13,167
Other income, net:			
Interest income, net	508	898	(390)
Other income (expense), net	98	(336)	434
Total other income, net	606	562	44
Loss before income taxes	(35,554)	(16,523)	(19,031)
Income tax provision	31	—	31
Net loss	$ (35,523)	$ (16,523)	$ (19,000)

Collaboration Revenue

Collaboration revenue was $2.6 million and $8.6 million for the six months ended June 30, 2017 and June 30, 2016, respectively, all of which related to the Sanofi-Genzyme Collaboration in recognition of amounts allocated to research and development services for various programs under the Collaboration Agreement.

During 2016, we reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for two units of accounting. Additionally, we and Sanofi-Genzyme agreed to deprioritize the development of the Spinal Muscular Atrophy Licensed Product and reduce the estimates related to the amount of "in-kind" services that would be provided by Sanofi-Genzyme. These adjustments were made on a prospective basis and resulted in decreases in revenue recognized by $2.4 million per quarter.

During the first quarter of 2017, we reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for two units of accounting. This adjustment was made on a prospective basis and resulted in decreases in revenue recognized by $0.4 million per quarter. During the second quarter of 2017, we reassessed the estimated period of performance for each of the units of accounting and determined that the estimated period would be extended for three units of accounting. This adjustment was made on a prospective basis and will result in decreases in revenue recognized by $0.1 million per quarter.

Research and Development Expense

Research and development expense increased by $10.2 million from $19.2 million for the six months ended June 30, 2016, to $29.4 million for the six months ended June 30, 2017. The following table summarizes our research and development expenses, for the six months ended June 30, 2017 and 2016:

	Six Months Ended June 30,		
	2017	2016	Change
	(in thousands)		
Research and development expenses	$ 15,342	$ 9,962	$ 5,380
Employee and contractor related expenses	10,048	7,200	2,848
Facility and other expenses	3,651	1,930	1,721
License fees	331	124	207
Total research and development expenses	$ 29,372	$ 19,216	$ 10,156

The increase in research and development expense for the six months ended June 30, 2017 was primarily attributable to the following:

- approximately $5.3 million for increased costs of funding research performed by third parties that conduct research and development, preclinical and clinical activities, and manufacturing and production preparation activities on our behalf, and increased purchases of lab supplies and non-capital equipment used in designing, developing, and manufacturing preclinical study materials, and an additional expense of approximately $0.1 million attributable to "in-kind" research and development services incurred by Sanofi-Genzyme and provided to us under the Sanofi-Genzyme Collaboration;

- approximately $2.8 million for increases in employee compensation cost due to increases in headcount; and

- approximately $1.7 million for increases in facilities and other costs including rent, depreciation, maintenance and other expenses.

General and Administrative Expense

General and administrative expense increased by $3.0 million from $6.4 million for the six months ended June 30, 2016 to $9.4 million for the six months ended June 30, 2017. The increase in general and administrative expense was primarily attributable to the following:

- approximately $1.6 million for increases in employee compensation cost due to increases in headcount;

- approximately $0.6 million for increases in facilities and other costs including rent, depreciation, and maintenance;

- approximately $0.5 million for increases in legal and professional fees; and

- approximately $0.4 million for increases in patent fees.

Other Income (Expense)

Other income of approximately $0.1 million was recognized during the six months ended June 30, 2017 related to grants received. There was approximately $0.5 million of interest income due to our marketable securities balances during the six months ended June 30, 2017.

Liquidity and Capital Resources

Sources of Liquidity

Prior to our IPO, we had funded our operations primarily through proceeds from private placements of our redeemable convertible preferred stock and convertible promissory notes of $135.0 million and proceeds associated with an up-front payment from the Sanofi-Genzyme Collaboration of $65.0 million.

As of June 30, 2017, we had cash, cash equivalents, and marketable debt securities of $141.3 million.

Cash Flows

The following table provides information regarding our cash flows for the six months ended June 30, 2017 and 2016:

	Six Months Ended June 30,	
	2017	2016
	(in thousands)	
Net cash (used in) provided by:		
Operating activities	$ (30,629)	$ (19,201)
Investing activities	59,188	54,831
Financing activities	1,100	93
Net increase in cash and cash equivalents	$ 29,659	$ 35,723

Net Cash Used in Operating Activities

Net cash used in operating activities was $30.6 million during the six months ended June 30, 2017 compared to $19.2 million during the six months ended June 30, 2016. This increase in cash used in operating activities is primarily due to increased research and development activities as we advanced our programs, as well as higher general and administrative expenses as a result of a higher headcount and legal fees year over year.

Net Cash Provided by Investing Activities

Net cash provided by investing activities was $59.2 million during the six months ended June 30, 2017 compared to $54.8 million during the six months ended June 30, 2016. The increase in cash provided by investing activities for the six months ended June 30, 2017 was primarily due to proceeds from maturities of marketable securities of $62.6 million, offset by $3.6 million for purchases of property and equipment. The cash provided by investing activities for the six months ended June 30, 2016 was primarily due to proceeds from maturities of marketable securities of $68.0 million, offset by $12.0 million of purchases of marketable securities.

Net Cash Provided by Financing Activities

Net cash provided by financing activities was $1.1 million and $0.1 million during the six months ended June 30, 2017 and 2016, respectively, primarily from proceeds of exercises of stock options and purchases of common stock under our ESPP.

Funding Requirements

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, continue or initiate clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to program sales, marketing, manufacturing, and distribution to the extent that such sales, marketing, and distribution are not the responsibility of potential collaborators. Furthermore, we expect to incur

additional costs associated with operating as a public company during 2017 and future years. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce, or eliminate our research and development programs or future commercialization efforts.

Based upon our current operating plan, we expect our existing cash, cash equivalents, and marketable securities will enable us to fund our operating expenses and capital expenditure requirements into 2019. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of product discovery, preclinical studies and clinical trials for our product candidates;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to establish and maintain collaborations on favorable terms, if at all;
- the achievement of milestones or occurrence of other developments that trigger payments under the Sanofi-Genzyme Collaboration and any other collaboration agreements we obtain;
- the ability of our collaboration partners to exercise options to extend research and development programs;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under collaboration agreements, if any;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property related claims;
- the extent to which we acquire or in license other product candidates and technologies;
- the costs related to evaluating possible alternative devices that may be useful in the delivery of our product candidates;
- the costs of securing manufacturing arrangements for commercial production; and
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidates.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes many years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of gene therapies that we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. To the extent that we raise additional capital through the sale of equity or redeemable convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or

product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations

The following table summarizes our significant contractual obligations as of payment due date by period at June 30, 2017:

	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years
Operating lease commitments[1]	$ 28,185	$ 1,610	$ 6,672	$ 7,630	$ 12,273

(1) We lease office space at 75 Sidney Street and 64 Sidney Street in Cambridge, Massachusetts under non-cancelable operating leases that expire in December 2024.

In January 2016, we executed an amendment to extend the lease for 75 Sidney Street in Cambridge, Massachusetts and executed a new agreement to lease 64 Sidney Street in Cambridge, Massachusetts, both terms going through December 2024.

We enter into agreements in the normal course of business with clinical research organizations, or CROs, contract manufacturing organizations, or CMOs, and institutions to license intellectual property. We have not included these future payments in the table of contractual obligations above since the contracts are cancelable at any time by us, generally upon 30 to 90 days prior written notice.

Our agreements to license intellectual property include potential milestone payments that are dependent upon the development of products using the intellectual property licensed under the agreements and contingent upon the achievement of clinical trial results or regulatory approval milestones. Under the terms of one agreement, we licensed intellectual property that may be used in the development of therapies for three disease indications. Under the agreement, we would be obligated to pay milestone payments that are contingent upon clinical trial results and regulatory approval of $5.0 million per disease indication, or up to $20.0 million in total. We are also required to pay annual maintenance fees to maintain the licenses. As of the six months ended June 30, 2017, we have paid $1.0 million to exercise the license to three indications under this agreement and an additional $90.0 thousand for maintenance fees.

In addition to the above commitments, in September 2016 we committed to purchase $1.0 million of the common stock of MRI Interventions, Inc., or MRIC, at MRIC's option upon the transfer of the manufacturing technology know how for the ClearPoint System to the alternate manufacturer. Upon termination of the agreement during the three months ended March 31, 2017, the commitment became null and void in full.

During September 2016, we entered into a research and development funding arrangement with a non-profit organization that provides up to $4.0 million in funding upon the achievement of clinical and development milestones. The agreement provides that we repay amounts received under certain circumstances including termination of the agreement, and to pay an amount up to 2.6 times the funding received upon successful development and commercialization of any products developed. During the three months ended March 31, 2017, we earned a milestone payment of $1.0 million. We have evaluated the arrangement and have concluded that it represents a research and development financing arrangement as it is probable that we will repay amounts received under the arrangement. As a result, the $1.0 million earned to date is recorded as a long-term liability in the accompanying balance sheet.

Other than the above, there were no material changes to our contractual obligations and commitments described under Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, as filed with the SEC on March 15, 2017.

Off-Balance Sheet Arrangements

We did not have, during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under applicable SEC rules.

JOBS Act

In April 2012, the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an emerging growth company, or EGC, can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, or the Securities Act, for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies.

Subject to certain conditions, as an EGC, we intend to rely on certain of these exemptions, including without limitation, (i) providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (ii) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board, or PCAOB, regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an EGC until the earlier of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.0 billion or more; (ii) December 31, 2020; (iii) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

ITEM 3.QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk related to changes in interest rates. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments, including cash equivalents, are in the form of money market fund and marketable securities and are invested in U.S. Treasury obligations.

We are not currently exposed to market risk related to changes in foreign currency exchange rates; however, we may contract with vendors that are located in Asia and Europe in the future and may be subject to fluctuations in foreign currency rates at that time.

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the six months ended June 30, 2017 and 2016, respectively.

ITEM 4.CONTROLS AND PROCEDURES

Management's Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (1) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

As of June 30, 2017, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. In designing and evaluating our disclosure controls and procedures, 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 management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our principal executive officer and principal financial officer have concluded based upon the evaluation described above that, as of June 30, 2017, our disclosure controls and procedures were effective at the reasonable assurance level in accomplishing the goals described above.

We continue to review and document our disclosure controls and procedures, including our internal controls and procedures for financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

Changes in Internal Control over Financial Reporting

During the three and six months ended June 30, 2017, there have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1.LEGAL PROCEEDINGS

As of the date of this Quarterly Report on Form 10-Q, we were not party to any legal matters or claims. In the future, we may become party to legal matters and claims arising in the ordinary course of business, the resolution of which we do not anticipate would have a material adverse impact on our financial position, results of operations, or cash flows.

ITEM 1A.RISK FACTORS

An investment in shares of our common stock involves a high degree of risk. The risk factors below are the only ones that have changed materially since disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 15, 2017. You should carefully consider the risk factors below as well as the other risk factors included in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 15, 2017, together with the other information appearing elsewhere in this Quarterly Report on Form 10-Q, including our condensed consolidated financial statements and related notes hereto, or our unaudited condensed consolidated financial statements and related notes in our Quarterly Report on Form 10-Q, which was filed with the SEC on May 9, 2017, before deciding to invest in our common stock. The occurrence of any of these risks could have a material adverse effect on our business, financial condition, results of operations and future growth prospects. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Financial Position and Need for Capital

We have incurred net losses since inception and anticipate that we will continue to incur losses for the foreseeable future and may never achieve or maintain profitability.

We are a clinical stage biotechnology company with a limited operating history, and have not yet generated revenues from the sales of our product candidates. Investment in biotechnology companies is highly speculative because it entails substantial upfront capital expenditures and significant risk that the product candidate will fail to obtain regulatory approval or become commercially viable. We have not yet demonstrated the ability to complete any clinical trials of our product candidates, obtain marketing approvals, manufacture a commercial-scale product or conduct sales and marketing activities necessary for successful commercialization. We continue to incur significant expenses related to research and development, and other operations in order to commercialize our product candidates. As a result, we are not and have never been profitable and have incurred losses since our inception. Our net loss was $35.5 million and $16.5 million for the six months ended June 30, 2017 and 2016, respectively. As of June 30, 2017, we had an accumulated deficit of $125.5 million.

To date, we have devoted substantially all of our financial resources to building our team, business planning, raising capital, establishing our intellectual property portfolio, determining which neurological diseases to pursue, advancing our product engine including (delivery and manufacturing) and conducting preclinical studies and clinical

trials. The net losses we incur may fluctuate significantly from quarter to quarter. We anticipate that our expenses will increase substantially if, and as, we:

- continue investing in our product engine to optimize vector engineering, manufacturing and dosing and delivery techniques;
- continue development of our clinical candidate, VY-AADC02;
- initiate additional preclinical studies and clinical trials for our other programs;
- continue our process research and development activities, as well as establish our research-grade and commercial manufacturing capabilities;
- identify additional neurological diseases for treatment with our AAV gene therapies;
- seek marketing approvals for VY-AADC or other product candidates that arise from our programs that successfully complete clinical trials;
- develop a sales, marketing and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio; and
- identify, acquire or in-license other product candidates and technologies.

To become and remain profitable, we must develop and eventually commercialize product candidates with significant market potential, which will require us to be successful in a range of challenging activities. These activities can include completing preclinical studies and clinical trials of our product candidates, obtaining marketing approval for these product candidates, manufacturing, marketing, and selling those products that are approved and satisfying any post-marketing requirements. We may never succeed in any or all of these activities and, even if we do, we may never generate revenues that are significant or large enough to achieve profitability. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our company also could cause you to lose all or part of your investment.

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 certain of our product development efforts or other operations.

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, initiate further clinical trials of and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant expenses related to product sales, medical affairs, marketing, manufacturing and distribution. Given the completion of our IPO on November 16, 2015, we expect to incur costs associated with operating as a public company. Accordingly, we will need to obtain substantial funding in connection with our continuing operations. If we are unable to raise capital when needed or on acceptable terms, we would be forced to delay, reduce or eliminate certain of our research and development programs.

Our operations have consumed significant amounts of cash since inception. As of June 30, 2017, our cash, cash equivalents, and marketable debt securities were $141.3 million. Based upon our current operating plan, we expect that our existing cash, cash equivalents, and marketable securities, will enable us to fund our operating expenses and capital expenditure requirements into 2019.

Our future capital requirements will depend on many factors, including:

- the scope, progress, results, and costs of product discovery, preclinical studies, and clinical trials for our product candidates;
- the scope, prioritization, and number of our research and development programs;
- the costs, timing, and outcome of regulatory review of our product candidates;
- our ability to establish and maintain collaborations on favorable terms, if at all;
- the achievement of milestones or occurrence of other developments that trigger payments under the Sanofi-Genzyme Collaboration and any other collaboration agreements we obtain;
- the ability of our collaboration partners to exercise options to extend research and development programs;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under collaboration agreements, if any;
- the costs of preparing, filing, and prosecuting patent applications, maintaining and enforcing our intellectual property rights, and defending intellectual property-related claims;
- the extent to which we acquire or in-license other product candidates and technologies;
- the costs of securing manufacturing arrangements for commercial production; and
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidates.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive, and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our product revenues, if any, and any commercial milestones or royalty payments under our collaboration agreements, will be derived from or based on sales of products that may not be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. To the extent that additional capital is raised through the sale of equity or equity-linked securities, the issuance of those securities could result in substantial dilution for our current stockholders and the terms may include liquidation or other preferences that adversely affect the rights of our current stockholders. To the extent that additional capital is raised through the issuance of debt, the agreement governing such debt may contain restrictive covenants related to our capital raising and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business operations, including potential acquisitions. Furthermore, the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our common stock to decline and our existing stockholders may not agree with the terms of such financings. Adequate additional financing may not be available to us on acceptable terms, or at all.

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.

The price of our common stock is likely to be volatile and may fluctuate substantially. From April 1, 2017 through June 30, 2017, the closing price of our common stock ranged from a high of $13.38 to a low of $8.63 on the NASDAQ Global Select Market. The stock market in general, and the market for biopharmaceutical companies in particular, has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- regulatory action and results of clinical trials of our product candidates or those of our competitors;
- the success of competitive products or technologies;

- commencement or termination of collaborations;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our product candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in the section titled “Risk Factors” and elsewhere in this Quarterly Report on Form 10-Q.

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

In the past, following periods of volatility in the market price of a company’s securities, securities class-action litigation often has been instituted against that company. Such litigation, if instituted against us, could cause us to incur substantial costs to defend such claims and divert management’s attention and resources, which could seriously harm our business, financial condition, and results of operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

We have no unregistered sales of securities for the three and six months ended June 30, 2017.

ITEM 6. EXHIBITS

The exhibits filed or furnished as part of this Quarterly Report are set forth on the Exhibit Index, which is incorporated herein by reference.

INDEX TO EXHIBITS

Exhibit No.	Description	Incorporated by Reference to:			
		Form or Schedule	Exhibit No.	Filing Date with SEC	SEC File Number
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14 or 15d-14.				
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14 or 15d-14.				
32.1+	Certification of Chief Executive Officer and Principal Chief Officer pursuant to Exchange Act Rules 13a-14(b) or 15d-14(b) and 18 U.S.C. Section 1350				
101.INS	XBRL Instance Document.				
101.SCH	XBRL Taxonomy Extension Schema Document.				
101.CAL	XBRL Taxonomy Extension Calculation Document.				
101.LAB	XBRL Taxonomy Extension Definition Linkbase Document.				
101.PRE	XBRL Taxonomy Extension Labels Linkbase Document.				
101.DEF	XBRL Taxonomy Extension Presentation Link Document.				

+ The certification furnished in Exhibit 32.1 hereto is deemed to be furnished with this Quarterly Report on Form 10-Q and will not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

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 8, 2017

VOYAGER THERAPEUTICS

By: */s/ Steven M. Paul, M.D.*
Steven M. Paul, M.D.
President and Chief Executive Officer and Director
(Principal Executive Officer)

By: */s/ Jane Henderson*
Jane Henderson
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

Certification

I, Steven M. Paul, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2017 of Voyager Therapeutics, 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)) 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.

5. The registrant's other certifying officer and I have disclosed, based on my 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 8, 2017

/s/ Steven M. Paul

Steven M. Paul
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

Certification

I, Jane Henderson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2017 of Voyager Therapeutics, 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)) 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.

5. The registrant's other certifying officer and I have disclosed, based on my 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 8, 2017

/s/ Jane Henderson

Jane Henderson
Chief Financial Officer
(Principal Financial 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 on Form 10-Q of Voyager Therapeutics, Inc. (the "Company") for the period ended June 30, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 that to his or her knowledge:

1) the Report which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 8, 2017

/s/ Steven M. Paul

Steven M. Paul
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 8, 2017

/s/ Jane Henderson

Jane Henderson
Chief Financial Officer
(Principal Financial Officer)