UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2020

OR

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

FOR THE TRANSITION PERIOD FROM TO

COMMISSION FILE NUMBER: 001-36485

ARDELYX, INC.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE	**26-1303944**
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(I.R.S. EMPLOYER IDENTIFICATION NUMBER)

34175 Ardenwood Boulevard,
Fremont, California 94555
(ADDRESS OF PRINCIPAL EXECUTIVE OFFICES, INCLUDING ZIP CODE)

(510) 745-1700
(REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001	ARDX	The Nasdaq Global Market

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or 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	☐	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 issued and outstanding shares of the registrant's Common Stock, $0.0001 par value per share, as of May 4, 2020, was 89,056,759.

ARDELYX, INC.

PART I. FINANCIAL INFORMATION

ITEM 1. CONDENSED FINANCIAL STATEMENTS

ARDELYX, INC.
CONDENSED BALANCE SHEETS
(Unaudited)
(in thousands, except share and per share amounts)

	March 31, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 105,895	$ 181,133
Short-term investments	117,312	66,379
Unbilled revenue	750	750
Prepaid expenses and other current assets	4,625	3,800
Total current assets	228,582	252,062
Property and equipment, net	2,968	3,436
Right-of-use assets	3,468	3,970
Other assets	304	314
Total assets	$ 235,322	$ 259,782
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 1,012	$ 2,187
Accrued compensation and benefits	1,951	4,453
Current portion of operating lease liability	2,715	2,608
Loan payable, current portion	7,437	1,183
Deferred revenue	3,366	4,541
Accrued expenses and other current liabilities	6,936	7,248
Total current liabilities	23,417	22,220
Operating lease liability, net of current portion	1,355	2,076
Loan payable, net of current portion	42,793	48,831
Total liabilities	67,565	73,127
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 5,000,000 shares authorized; no shares issued and outstanding as of March 31, 2020 and December 31, 2019, respectively.	—	—
Common stock, $0.0001 par value; 300,000,000 shares authorized; 89,035,096 and 88,817,741 shares issued and outstanding as of March 31, 2020 and December 31, 2019, respectively.	9	9
Additional paid-in capital	650,617	647,078
Accumulated deficit	(482,825)	(460,452)
Accumulated other comprehensive (loss) income	(44)	20
Total stockholders' equity	167,757	186,655
Total liabilities and stockholders' equity	$ 235,322	$ 259,782

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

ARDELYX, INC.
CONDENSED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Unaudited)
(in thousands, except share and per share amounts)

	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019
Revenues:		
Collaborative development revenue	$ 1,175	$ —
Other revenue	38	—
Total revenues	1,213	—
Operating expenses:		
Research and development	15,844	20,381
General and administrative	7,138	5,117
Total operating expenses	22,982	25,498
Loss from operations	(21,769)	(25,498)
Interest expense	(1,357)	(1,434)
Other income, net	753	790
Loss before provision for income taxes	(22,373)	(26,142)
Provision for income taxes	—	2
Net loss	$ (22,373)	$ (26,144)
Net loss per common share, basic and diluted	$ (0.25)	$ (0.42)
Shares used in computing net loss per share - basic and diluted	88,880,658	62,546,295
Comprehensive loss:		
Net loss	(22,373)	(26,144)
Unrealized (losses) gains on available-for-sale securities	(64)	50
Comprehensive loss	$ (22,437)	$ (26,094)

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

ARDELYX, INC.
CONDENSED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Unaudited)
(in thousands, except share amounts)

	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance as of December 31, 2019	88,817,741	$ 9	$ 647,078	$ (460,452)	$ 20	$ 186,655
Issuance of common stock under employee stock purchase plan	75,804	—	375	—	—	375
Issuance of common stock upon exercise of options	141,551	—	216	—	—	216
Stock-based compensation	—	—	2,948	—		2,948
Unrealized losses on available-for-sale securities	—	—	—	—	(64)	(64)
Net loss	—	—	—	(22,373)	—	(22,373)
Balance as of March 31, 2020	89,035,096	$ 9	$ 650,617	$ (482,825)	$ (44)	$ 167,757

	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
Balance as of December 31, 2018	62,516,627	$ 6	$ 481,357	$ (365,512)	$ (38)	$ 115,813
Issuance of common stock under employee stock purchase plan	83,046	—	198	—	—	198
Issuance of common stock upon exercise of options	770	—	2	—	—	2
Stock-based compensation	—		1,922	—		1,922
Unrealized gains on available-for-sale securities	—	—	—	—	50	50
Net loss	—	—	—	(26,144)	—	(26,144)
Balance as of March 31, 2019	62,600,443	$ 6	$ 483,479	$ (391,656)	$ 12	$ 91,841

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

ARDELYX, INC.
CONDENSED STATEMENTS OF CASH FLOWS
(Unaudited)
(in thousands)

	Three Months Ended March 31,	
	2020	**2019**
Operating activities		
Net loss	$ (22,373)	$ (26,144)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	492	675
Amortization of deferred financing costs	112	120
Amortization of deferred compensation for services	89	76
Amortization of premium on investment securities	(138)	(301)
Non-cash lease expense	502	439
Stock-based compensation	2,948	1,922
Change in derivative liabilities	82	37
Non-cash interest associated with debt discount accretion	127	113
Changes in operating assets and liabilities:		
Unbilled revenue	—	5,000
Prepaid expenses and other assets	(928)	411
Accounts payable	(1,174)	777
Accrued compensation and benefits	(2,502)	(1,089)
Lease liabilities	(614)	—
Accrued and other liabilities	(394)	1,051
Deferred revenue	(1,175)	—
Net cash used in operating activities	(24,946)	(16,913)
Investing activities		
Proceeds from maturities of investments	4,000	55,020
Purchases of investments	(54,858)	(24,874)
Purchases of property and equipment	(25)	(165)
Net cash (used in) provided by investing activities	(50,883)	29,981
Financing activities		
Proceeds from issuance of common stock under stock plans	375	198
Issuance of common stock upon exercise of options	216	2
Net cash provided by financing activities	591	200
Net (decrease) increase in cash and cash equivalents	(75,238)	13,268
Cash and cash equivalents at beginning of period	181,133	78,768
Cash and cash equivalents at end of period	$ 105,895	$ 92,036
Supplementary disclosure of cash flow information:		
Income taxes paid	$ —	$ 2
Supplementary disclosure of non-cash activities:		
Right-of-use assets obtained in exchange for lease obligations	$ —	$ 5,810

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

ARDELYX, INC.
NOTES TO CONDENSED FINANCIAL STATEMENTS
(Unaudited)
(tabular amounts in thousands, except share and per share amounts and where otherwise noted)

NOTE 1. ORGANIZATION AND BASIS OF PRESENTATION

Ardelyx, Inc. (the "Company," "we," "us" or "our") is a specialized biopharmaceutical company focused on developing innovative first-in-class medicines to improve treatment for people with kidney and cardiovascular diseases.

The Company operates in one business segment, which is the research and development of biopharmaceutical products.

Basis of Presentation

These condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and pursuant to the requirements of the Securities and Exchange Commission ("SEC") for interim reporting. As permitted under those rules and regulations, certain footnotes or other financial information that are normally required by U.S. GAAP have been condensed or omitted. These condensed financial statements have been prepared on the same basis as the Company's most recent annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments necessary to present fairly the Company's financial position at March 31, 2020 and results of operations, changes in stockholders' equity, and cash flows for the interim periods ended March 31, 2020 and 2019.

The accompanying condensed financial statements and related financial information should be read in conjunction with the audited financial statements and the related notes thereto included in the Company's Annual Report on Form 10-K the year ended December 31, 2019. The results for the three months ended March 31, 2020, are not necessarily indicative of results to be expected for the entire year ending December 31, 2020, or any other interim period or future year.

Prior Period Errors

In connection with our review of our financial statements as of and for the six months ended June 30, 2019, we corrected errors related to the accounting for clinical trial accruals that had resulted in an overstatement of research and development expenses during the three months ended March 31, 2019 and during the year ended December 31, 2018. Specifically, management concluded that the Company's research and development expenses recorded during the three months ended March 31, 2019 and during year ended December 31, 2018 had been overstated by $0.5 million and $3.6 million, respectively, and that the Company's accrued expenses and other current liabilities for these periods had been overstated by the same amounts.

Management analyzed the potential impact of these errors in accordance with the SEC's Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements*, and concluded that while the errors were significant to the Company's financial statements as of and for the six months ended June 30, 2019, a correction of the errors would not have been material to each quarter or the full year results for 2019 and 2018 nor affect the trend of financial results. Accordingly, during the second quarter of 2019, the Company reduced accrued and other liabilities by $4.1 million and recorded a cumulative adjustment of $4.1 million in the condensed statement of operations to reduce research and development expenses.

Liquidity

As of March 31, 2020, the Company had cash, cash equivalents and short-term investments of approximately $223.2 million. The Company believes its current available cash, cash equivalents and short-term investments will be sufficient to fund the Company's planned expenditures and meet its obligations for at least 12 months following May 7, 2020, which is the date that these condensed financial statements are being issued.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments that affect the amounts reported in the financial statements and accompanying notes thereto. On an ongoing basis, management evaluates its estimates, including those related to recognition of revenue, clinical trial accruals, contract manufacturing accruals, the fair value of assets and liabilities, income taxes and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could materially differ from those estimates.

Summary of Significant Accounting Policies

There have been no changes to the significant accounting policies disclosed in the Company's most recent Annual Report on Form 10-K.

Recently Adopted Accounting Pronouncements

In November 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606* ("ASU 2018-18"), which clarifies that certain transactions between collaborative arrangement participants should be accounted for as revenue under the FASB's Accounting Standards Codification ("ASC") No. 606, *Revenue from Contracts with Customers* ("ASC 606") when the collaborative arrangement participant is a customer. The Company adopted ASU 2018-18 on January 1, 2020, and the adoption of this standard did not have a material impact on the Company's financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which considers cost and benefits and removes, modifies and adds disclosure requirements in Topic 820. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the narrative description of measurement uncertainty is to be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments were to be applied retrospectively to all periods presented. The Company adopted ASU 2018-13 on January 1, 2020, and the adoption of this standard did not have a material impact on the Company's financial statements.

Recent Accounting Pronouncements Not Yet Adopted

In December 2019, the FASB issued ASU No. 2019-12 *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which removes certain exceptions for intra period allocations, recognizing deferred taxes for investments and calculating income taxes in interim periods. This ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. The guidance is effective for the Company for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. Management is currently assessing the impact of this standard on the Company's financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, an amendment which modifies the measurement and recognition of credit losses for most financial assets and certain other instruments. The amendment updates the guidance for measuring and recording credit losses on financial assets measured at amortized cost by replacing the "incurred loss" model with an "expected loss" model. Accordingly, these financial assets will be presented at the net amount expected to be collected. The amendment also requires that credit losses related to available-for-sale debt securities be recorded as an allowance through net income rather than reducing the carrying amount under the current, other-than-temporary-impairment model. For smaller reporting companies the guidance is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted. Management is currently assessing the impact of this standard on the Company's financial statements.

NOTE 2. CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS

Securities classified as cash, cash equivalents and short-term investments as of March 31, 2020 and December 31, 2019, are summarized below.

	March 31, 2020			
		Gross Unrealized		
	Amortized Cost	Gains	Losses	Fair Value
Cash and cash equivalents:				
Money market funds	$ 100,755	$ —	$ —	$ 100,755
Commercial paper	3,999	—	—	3,999
Cash	1,141	—	—	1,141
Total cash and cash equivalents	105,895	—	—	105,895
Short-term investments				
Commercial paper	$ 53,605	$ 106	$ —	$ 53,711
Corporate bonds	49,245	10	(133)	49,122
Asset-backed securities	10,510	—	(52)	10,458
U.S. treasury notes	3,996	25	—	4,021
Total short-term investments	117,356	141	(185)	117,312
Total cash equivalents and short-term investments	$ 223,251	$ 141	$ (185)	$ 223,207

	December 31, 2019			
		Gross Unrealized		
	Amortized Cost	Gains	Losses	Fair Value
Cash and cash equivalents:				
Money market funds	$ 147,208	$ —	$ —	$ 147,208
Commercial paper	19,357	3	—	19,360
Corporate bonds	11,441	—	—	11,441
Cash	3,124	—	—	3,124
Total cash and cash equivalents	181,130	3	—	181,133
Short-term investments				
Commercial paper	$ 36,667	$ 14	$ —	$ 36,681
Corporate bonds	21,690	6	(3)	21,693
Asset-backed securities	8,005	—	—	8,005
Total short-term investments	66,362	20	(3)	66,379
Total cash equivalents and short-term investments	$ 247,492	$ 23	$ (3)	$ 247,512

All available-for-sale securities held as of March 31, 2020 had contractual maturities of less than one year. The Company's available-for-sale securities are subject to a periodic impairment review. The Company considers a debt security to be impaired when the fair value of that security is less than its carrying cost, in which case the Company would further evaluate the investment to determine whether the security is other-than-temporarily impaired. When the Company evaluates an investment for other-than-temporary impairment, the Company reviews factors such as the length of time and extent to which fair value has been below cost basis, the financial condition or creditworthiness of the issuer and any changes thereto, intent to sell, and whether it is more likely than not the Company will be required to sell the investment before the recovery of its cost basis. If an investment is other-than-temporarily impaired, the Company writes the investment down through the statement of operations to its fair value and establishes that value as the new cost basis for the investment. Management has determined that none of the Company's available-for-sale securities were other-than-temporarily impaired in any of the periods presented, and as of March 31, 2020, no investment was in a continuous unrealized loss position for more than one year. As such, the Company believes that it is more likely than not that the investments will be held until maturity or a forecasted recovery of fair value.

While our investment policy requires that we only invest in highly-rated securities and limit our exposure to any single issuer, the COVID-19 pandemic may materially affect the financial conditions of issuers, which could result in a default by one or more issuers or result in downgrades below our minimum credit rating requirements.

NOTE 3. FAIR VALUE MEASUREMENTS

The Company's financial instruments consist of cash and cash equivalents, short-term investments, prepaid expenses, other current assets, accounts payable, accrued expenses, and the Term Loan, as defined and discussed in Note 5. Fair value estimates of these instruments are made at a specific point in time based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of significant judgment. The carrying amounts of financial instruments such as cash and cash equivalents, prepaid expenses, other current assets, accounts payable and accrued expenses approximate the related fair values due to the short maturities of these instruments. Based on prevailing borrowing rates available to the Company for loans with similar terms, the Company believes the fair value of the Term Loan, considering level 2 inputs, approximates this instrument's carrying value.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

The three-level hierarchy for the inputs to valuation techniques is briefly summarized as follows:

Level 1 – Valuations are based on quoted prices in active markets for identical assets or liabilities and readily accessible by the Company at the reporting date. Examples of assets and liabilities utilizing Level 1 inputs are certain money market funds, U.S. treasuries and trading securities with quoted prices on active markets.

Level 2 – Valuations based on inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Examples of assets and liabilities utilizing Level 2 inputs are corporate bonds, commercial paper, certificates of deposit and over-the-counter derivatives.

Level 3 – Valuations based on unobservable inputs in which there is little or no market data, which require the Company to develop its own assumptions.

The following table sets forth the fair value of the Company's financial assets and liabilities that are measured or disclosed on a recurring basis:

	March 31, 2020			
	Total Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds	$ 100,755	$ 100,755	$ —	$ —
Commercial paper	57,710	—	57,710	—
Corporate bonds	49,122	—	49,122	—
Asset-backed securities	10,458	—	10,458	—
U.S. treasury notes	4,021	4,021	—	—
Total	$ 222,066	$ 104,776	$ 117,290	$ —
Liabilities:				
Derivative liability for Exit Fee	$ 1,051	$ —	$ —	$ 1,051
Total	$ 1,051	$ —	$ —	$ 1,051

	December 31, 2019			
	Total Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds	$ 147,208	$ 147,208	$ —	$ —
Commercial paper	56,041	—	56,041	—
Corporate bonds	33,134	—	33,134	—
Asset-backed securities	8,005	—	8,005	—
Total	$ 244,388	$ 147,208	$ 97,180	$ —
Liabilities:				
Derivative liability for Exit Fee	$ 969	$ —	$ —	$ 969
Total	$ 969	$ —	$ —	$ 969

Where quoted prices are available in an active market, securities are classified as Level 1. The Company classifies money market funds, U.S. treasury securities and U.S. treasury notes as Level 1. When quoted market prices are not available for the specific security, the Company estimates fair value by using benchmark yields, reported trades, broker/dealer quotes and issuer spreads. The Company classifies corporate bonds, commercial paper, asset-backed securities and foreign currency derivative contracts as Level 2. In certain cases, where there is limited activity or less transparency around inputs to valuation, securities or derivative liabilities such as the Exit Fee, as defined and discussed in Note 4, are classified as Level 3. There were no transfers between Level 1 and Level 2 during the periods presented.

NOTE 4. DERIVATIVE LIABILITY

In May 2018, in connection with entering into the Loan Agreement, as defined and discussed in Note 5, the Company entered into an agreement pursuant to which the Company agreed to pay $1.5 million in cash (the "Exit Fee") upon any change of control transaction in respect of the Company or if the Company obtains both (i) U.S. Food and Drug Administration ("FDA") approval of tenapanor for the treatment of hyperphosphatemia in chronic kidney disease ("CKD") patients on dialysis and (ii) FDA approval of tenapanor for the treatment of patients with irritable bowel syndrome with constipation ("IBS-C"), which was obtained on September 12, 2019 when the FDA approved IBSRELA® (tenapanor), a 50 milligram, twice daily oral pill for the treatment of IBS-C in adults (the "Exit Fee Agreement"). Notwithstanding the prepayment or termination of the Term Loan, as defined and discussed in Note 5, the Company's obligation to pay the Exit Fee will expire on May 16, 2028. The Company concluded that the Exit Fee is a freestanding derivative which should be accounted for at fair value on a recurring basis. The estimated fair value of the Exit Fee is recorded as a derivative liability and included in accrued expenses and other current liabilities on the accompanying condensed balance sheets.

The fair value of the derivative liability was determined using a discounted cash flow analysis, and the key assumptions included in the calculation of the estimated fair value of the derivative liability include: (i) the Company's estimates of both the probability and timing of payment of the Exit Fee to Solar Capital Ltd. and Western Alliance Bank as a result of the FDA approvals and (ii) a variable discount rate. Generally, increases or decreases in the probability of occurrence would result in a directionally similar impact in the fair value measurement of the derivative liability, and it is estimated that a 10% increase or decrease in the probability of occurrence would result in a fair value fluctuation of approximately $0.1 million.

Changes in fair value, which are presented as other income, net, in the Company's condensed statements of operations, were as follows:

	Three Months Ended March 31,	
	2020	**2019**
Fair value of Exit Fee derivative liability at January 1	$ 969	$ 533
Change in estimated fair value of derivative liability	82	37
Fair value of Exit Fee derivative liability at March 31	$ 1,051	$ 570

NOTE 5. BORROWING

Solar Capital and Western Alliance Bank Loan Agreement

On May 16, 2018, the Company entered into a loan and security agreement (the "Loan Agreement"), with Solar Capital Ltd. and Western Alliance Bank (collectively the "Lenders"). The Loan Agreement provides for a $50.0 million term loan facility with a maturity date of November 1, 2022 (the "Term Loan").

Borrowings under the Term Loan bear interest at a floating per annum rate equal to 7.45% plus the one-month LIBOR. The Company is permitted to make interest-only payments on the Term Loan through June 1, 2020, unless prior to that date the Company achieves its primary endpoint in the Phase 3 study of tenapanor for the treatment of hyperphosphatemia in end-stage renal disease patients on dialysis (the "Phase 3 Endpoint"), in which case the Company is permitted to make interest-only payments on the Term Loan until December 1, 2020. On December 3, 2019, the Company reported positive topline results for PHREEDOM, a long-term Phase 3 study evaluating the efficacy and safety of tenapanor as monotherapy for the treatment of hyperphosphatemia in patients with CKD on dialysis. The Lenders are in agreement that these positive data from the Phase 3 PHREEDOM study meet the definition of the Phase 3 Endpoint. Accordingly, beginning on December 1, 2020 and through the maturity date, in addition to monthly interest payments, the Company will be required to make monthly principal payments in equal monthly installments of approximately $2.1 million.

The Company paid a closing fee of 1% of the Term Loan, or $0.5 million, upon the closing of the Term Loan, and the Company is obligated to pay a final fee equal to 3.95% of the Term Loan upon the earliest to occur of the maturity date, the acceleration of the Term Loan, the prepayment or repayment of the Term Loan or the termination of the Loan Agreement. The Company may voluntarily prepay the outstanding Term Loan, subject to a prepayment premium of (i) 3% of the principal amount of the Term Loan if prepaid prior to or on the first anniversary of the Closing Date, (ii) 2% of the principal amount of the Term Loan if prepaid after the first anniversary of the Closing Date through and including the second anniversary of the Closing Date, or (iii) 1% of the principal amount of the Term Loan if prepaid after the second anniversary of the Closing Date and prior to the maturity date. The Term Loan is secured by substantially all the Company's assets, except for the Company's intellectual property and certain other customary exclusions. Additionally, in connection with the Term Loan, the Company entered into the Exit Fee Agreement, as discussed in Note 4.

The Loan Agreement contains customary representations and warranties and customary affirmative and negative covenants. As of March 31, 2020, the Company was in compliance with all of the covenants set forth in the Loan Agreement.

The Loan Agreement also contains customary events of default that entitle the Lender to cause the Company's indebtedness under the Loan Agreement to become immediately due and payable, and to exercise remedies against the Company and the collateral securing the Term Loan, including the Company's cash. Upon the occurrence and for the duration of an event of default, an additional default interest rate equal to 4.0% per annum will apply to all amounts owed under the Loan Agreement. As of March 31, 2020, to the Company's knowledge, there were no facts or circumstances in existence that would give rise to an event of default.

As of March 31, 2020, the Company's future payment obligations related to the Term Loan, excluding interest payments and the Exit Fee, are as follows:

Remainder of 2020	$ 2,083
2021	25,000
2022	24,892
Total principal and final fee payments	51,975
Less: Unamortized discount and debt issuance costs	(652)
Less: Unaccreted value of final fee	(1,093)
Loan payable	50,230
Less: Loan payable, current portion	7,437
Loan payable, net of current portion	$ 42,793

NOTE 6. LEASES

All of the Company's leases, which primarily include the right to use office and laboratory space, are operating leases, and certain of the leases have both lease and non-lease components. The Company has elected to account for each separate lease component and the non-lease components associated with that lease component as a single lease component for all classes of underlying assets.

The following table provides additional details related to our facility leases, as presented in the Company's condensed balance sheet as of March 31, 2020:

Facilities	
Right of use assets	$ 3,468
Current portion of lease liabilities	2,715
Operating lease liability, net of current portion	1,355
Total	$ 4,070
Weighted-average remaining life (years)	1.5
Weighted-average discount rate	12.99 %

Other information related to the Company's facilities lease is as follows:

	Three Months Ended March 31,	
	2020	**2019**
Operating lease expense	$ 648	$ 648
Cash paid for operating lease	$ 760	$ 614

The following table summarizes the Company's undiscounted cash payment obligations for its operating lease liabilities as of March 31, 2020:

Remainder of 2020	$	2,306
2021		2,183
Total undiscounted operating lease payments		4,489
Imputed interest expenses		(419)
Total operating lease liabilities		4,070
Less: Current portion of operating lease liability		2,715
Operating lease liability, net of current portion	$	1,355

NOTE 7. EQUITY INCENTIVE PLANS

Stock Option Plan

During the three months ended March 31, 2020, options were granted to employees to purchase 1,919,789 shares. The weighted-average grant-date estimated fair value of options granted during the three months ended March 31, 2020 was $5.27. The estimated grant date fair value of employee stock options was calculated using the Black-Scholes option-pricing model, based on the following weighted-average assumptions:

	Three Months Ended March 31, 2020
Expected term (years)	6.00
Expected volatility	83.62 %
Risk-free interest rate	1.68 %
Dividend yield	— %

During the three months ended March 31, 2020 and 2019, options were exercised to purchase 141,551 and 770 shares, respectively, of the Company's common stock, resulting in approximately $0.2 million and insignificant net proceeds to the Company in the three months ended March 31, 2020 and 2019, respectively.

Restricted Stock Units ("RSUs")

In July 2018, the Company granted 903,374 performance-based restricted stock units ("PRSUs") to its employees that vest upon the achievement of certain performance conditions, subject to the employees' continued service relationship with the Company through the achievement date. As of March 31, 2020, 849,328 of these PRSUs were outstanding and none of these PRSUs were vested. Based on the evaluation of the performance conditions, the Company recorded stock-based compensation expense of $0.9 million and zero for the three months ended March 31, 2020 and 2019, respectively. The related compensation cost is recognized as an expense ratably over the estimated vesting period. The expense recognized for these awards is based on the grant date fair value of the Company's common stock multiplied by the number of units granted.

No RSUs or PRSUs were granted during the three months ended March 31, 2020 or 2019. Similarly, no common shares were issued upon vesting of time-based RSUs during these periods.

Employee Stock Purchase Plan

In February 2020, the Company sold 75,804 shares of its common stock under the Company's employee stock purchase program ("ESPP"). The shares were purchased by employees at a purchase price of $4.95 per share with proceeds to the Company of approximately $0.4 million.

Stock-Based Compensation

Stock-based compensation expense recognized for stock options, RSUs, PRSUs and the Company's ESPP are recorded as operating expenses in the Company's condensed statements of operations and comprehensive loss, as follows:

	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019
Research and development	$ 1,058	$ 760
General and administrative	1,890	1,162
Total	$ 2,948	$ 1,922

As of March 31, 2020, the Company's total unrecognized stock-based compensation expense, net of estimated forfeitures, and average remaining vesting period, included the following:

	Unrecognized Compensation Expense	Average Remaining Vesting Period (Years)
Stock options	$ 13,401	3.0
PRSUs	$ 602	0.4
ESPP	$ 194	0.4

NOTE 8. NET LOSS PER SHARE

Basic net loss per share is calculated by dividing net loss by the weighted-average number of common shares outstanding during the period, less shares subject to repurchase, and excludes any dilutive effects of stock-based awards and warrants. Diluted net loss per common share is computed giving effect to all potential dilutive common shares, including common stock issuable upon exercise of stock options, and unvested restricted common stock and stock units. As the Company had net losses for the three months ended March 31, 2020 and 2019, all potential common shares were determined to be anti-dilutive. The following table sets forth the computation of net loss per common share:

	Three Months Ended 2020	Three Months Ended 2019
Numerator:		
Net loss	$ (22,373)	$ (26,144)
Denominator:		
Weighted average common shares outstanding - basic and diluted	88,880,658	62,546,295
Net loss per share - basic and diluted	$ (0.25)	$ (0.42)

For the three months ended March 31, 2020 and 2019, the total number of securities that could potentially dilute basic net loss per share in the future that were not included in the computation of diluted net loss per share because the effect would have been antidilutive was 11.9 million and 9.9 million, respectively.

NOTE 9. COLLABORATION AND LICENSING AGREEMENTS

Kyowa Kirin Co., Ltd. ("KKC")

2019 KKC Agreement

In November 2019, the Company entered into a research collaboration and option agreement with KKC (the "2019 KKC Agreement") for research associated with identifying two pre-clinical compounds that are ready for designation as development compounds, with one compound inhibiting the first undisclosed target ("Program 1"), and a second inhibiting the second undisclosed target ("Program 2"). Pursuant to the 2019 KKC Agreement, upon completion of the research and designation by the research steering committee of one or more development candidates ("DCs"), KKC has the right to execute one or more separate collaborative agreements relating to the development and commercialization of one or both DCs in certain specified territories.

Under the terms of the 2019 KKC Agreement, KKC agreed to pay the Company a non-refundable, non-creditable upfront fee of $10.0 million, payable as follows: the first installment of $5.0 million within 30 days of November 11, 2019 (the "Effective Date"), and the second installment of $5.0 million on the first anniversary of the Effective Date, unless the 2019 KKC Agreement is earlier terminated by KKC due to material breach by the Company. The term of the 2019 KKC Agreement commenced on the Effective Date and ends on the earliest of: (i) two years following the Effective Date, or (ii) the nomination of a program DC for both programs, (iii) or the nomination of one program DC and the decision by the parties to cease research for the other program, or (iv) the decision by the parties to cease research for both programs. The Company assessed the 2019 KKC Agreement in accordance with ASC 606 and concluded that the contract's counterparty, KKC, is a customer. Management also considered the modification guidance prescribed in ASC 606 and concluded that the 2019 KKC Agreement should be accounted for as a separate contract from the 2017 KKC Agreement, as defined and discussed below.

The Company identified various promises in the 2019 KKC Agreement, including: the grant of an initial research license; the Program 1 research; the Program 2 research; the right to obtain certain development and commercialization rights to a Program 1 DC in certain territories; the right to obtain development and commercialization rights to a Program 2 DC in certain territories; and participation in a joint steering committee ("JSC"). The Company determined that KKC could not benefit from either of the research programs without the research license and participation in the JSC. As such, the combined license, research programs and participation in the JSC were deemed to be the highest level of goods and services that can be deemed distinct for each of the Program 1 research and Program 2 research. The Company concluded that the options to obtain additional development and commercialization rights that are exercisable by KKC under certain circumstances are not performance obligations of the contract at inception because the option fees reflect the standalone selling price of the options, and therefore, the options are not considered to be material rights.

At the outset of the 2019 KKC Agreement, the Company determined that the initial transaction price amounted to $10.0 million and that revenue associated with the combined performance obligations will be recognized as services are provided using an input method. Since transfer of control occurs over time, in management's judgment this input method is the best measure of progress towards satisfying the performance obligations and reflects a faithful depiction of the transfer of goods and services. Revenue will be recognized over the Program 1 and Program 2 research periods, which are currently expected to extend through the end of 2021. Management will re-evaluate the estimates related to the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur and adjust the timing of revenue recognition as necessary.

During the three months ended March 31, 2020, the Company recognized $1.2 million as revenue under the 2019 KKC Agreement in the statement of operations and comprehensive loss. The aggregate amount of the transaction price allocated to the Company's partially unsatisfied performance obligations as of March 31, 2020 was $8.4 million, of which $3.4 million is presented in the accompanying condensed balance sheet as deferred revenue. As of March 31, 2020, the Company expects to recognize the remaining transaction price allocated to the Company's partially unsatisfied performance obligations over the remaining research terms, which, as noted above, are currently expected to extend through the end of 2021. There were no changes in estimates associated with the 2019 KKC Agreement during the three months ended March 31, 2020.

2017 KKC Agreement

In November 2017, the Company entered into an exclusive license agreement with KKC (the "2017 KKC Agreement"), for the development, commercialization and distribution of tenapanor in Japan for cardiorenal indications. The Company granted KKC an exclusive license to develop and commercialize certain sodium hydrogen exchanger 3 ("NHE3") inhibitors including tenapanor in Japan for the treatment of cardiorenal diseases and conditions, excluding cancer. The Company retained the rights to tenapanor outside of Japan, and also retained the rights to tenapanor in Japan for indications other than those stated above. Pursuant to the 2017 KKC Agreement, KKC is responsible for all costs and expenses incurred in the development and commercialization of tenapanor for the treatment of cardiorenal diseases and conditions, excluding cancer in Japan. Under the 2017 KKC Agreement, the Company is responsible for supplying the tenapanor drug product for KKC's use in development and during commercialization until KKC has assumed such responsibility. Additionally, the Company is responsible for supplying the tenapanor drug substance for KKC's use in development and commercialization throughout the term of the 2017 KKC Agreement, provided that KKC may exercise an option to manufacture the tenapanor drug substance under certain conditions.

The Company assessed these arrangements in accordance with ASC 606 and concluded that the contract counterparty, KKC, is a customer. Under the terms of the 2017 KKC Agreement, the Company received $30.0 million in upfront license fees, which was recognized as revenue when the agreement was executed. Based on the Company's assessment, management determined that the license and the manufacturing supply services were its material performance obligations at the inception of the 2017 KKC Agreement, and as such, each of the performance obligations is distinct. Additionally, the Company recorded unbilled revenue of $5.0 million and an increase in uncharged license fees of $1.0 million related to the first milestone under the 2017 KKC Agreement that KKC; this first milestone was achieved in February 2019.

In addition to the $30.0 million upfront license fee, the Company may be entitled to receive up to $55.0 million in total development milestones, of which $5.0 million has been received to date, and approximately $78.3 million in commercialization milestones, as well as reimbursement of costs plus a reasonable overhead for the supply of product and high-teen royalties on net sales throughout the term of the agreement. The variable consideration related to the remaining development milestone payments has not been included in the transaction price as these were fully constrained at March 31, 2020.

During the three months ended March 31, 2020 and 2019, the Company recognized $38,000 and zero, respectively, as other revenue related to the manufacturing supply of tenapanor and other materials to KKC pursuant to the 2017 KKC Agreement.

Xuanzhu (HK) Biopharmaceutical Limited ("XuanZhu")

In November 2019, the Company entered into a license agreement with XuanZhu (the "XuanZhu Agreement"), pursuant to which the Company granted XuanZhu a license to certain specific patent and patent applications. The Company assessed the XuanZhu Agreement in accordance with ASC 606 and concluded that the contract counterparty, XuanZhu, is a customer. Under the terms of the XuanZhu Agreement, the Company recognized $1.5 million in license fees, which constituted the initial transaction price, when the agreement was executed, of which $750,000 was received upfront in November 2019, and achievement for the second $750,000 payment, related to the issuance and grant of a specific patent, was determined to be not materially at risk and probable of achievement. Based on management's assessment, the Company determined that it has one combined performance obligation, which is the license and the specific patent grant.

No revenue related to the XuanZhu Agreement was recorded during the three months ended March 31, 2020.

Shanghai Fosun Pharmaceutical Industrial Development Co. Ltd. ("Fosun Pharma")

In December 2017, the Company entered into an exclusive license agreement with Fosun Pharma (the "Fosun Agreement"), for the development, commercialization and distribution of tenapanor in China for both hyperphosphatemia and IBS-C. The Company assessed these arrangements in accordance with ASC 606 and concluded that the contract counterparty, Fosun Pharma, is a customer. Under the terms of the Fosun Agreement, the Company received $12.0 million in upfront license fees which was recognized as revenue when the agreement was executed. Based on management's assessment, the Company determined that the license and the manufacturing supply services represented the material performance obligations at the inception of the agreement, and as such, each of the performance obligations is distinct.

The Company may be entitled to additional development and commercialization milestones of up to $110.0 million, as well as reimbursement of cost plus a reasonable overhead for the supply of product and tiered royalties on net sales ranging from the mid-teens to 20%. The variable consideration related to the remaining development milestone payments has not been included in the transaction price as these were fully constrained at March 31, 2020.

The Company has recorded no revenue during the three months ended March 31, 2020 or 2019 related to the Fosun Agreement.

Knight Therapeutics, Inc. ("Knight")

In March 2018, the Company entered into an exclusive license agreement with Knight (the "Knight Agreement"), for the development, commercialization and distribution of tenapanor in Canada for hyperphosphatemia and IBS-C. The Company assessed this arrangement in accordance with ASC 606 and concluded that the contract counterparty, Knight, is a customer. Based on management's assessment, the Company determined that the license and the manufacturing supply services represented the material performance obligations at the inception of the agreement, and as such, each of the performance obligations is distinct.

Under the terms of the agreement, the Company is eligible to receive up to $17.6 million, including an upfront payment, development and sales milestones, reimbursement of supply costs on a schedule specifying cost per tablet, with a reasonable mark up for overhead, as well as tiered royalty rates on net sales ranging from the mid-single digits to the low twenties. The variable consideration related to the remaining development milestone payments has not been included in the transaction price as these were fully constrained at March 31, 2020.

During the three months ended March 31, 2020 and 2019, no revenue was recorded related to the Knight Agreement.

The following table presents changes in the Company's deferred revenue balance, which is attributable entirely to the 2019 KKC Agreement discussed above, during the reporting period:

	Deferred revenue
Balance at December 31, 2019	$ 4,541
Increases due to cash received, excluding amounts recognized as revenue during the period	—
Decreases due to revenue recognized in the period for which cash has been received	(588)
Decreases due to revenue recognized in the period for which cash has not been received	(587)
Balance at March 31, 2020	$ 3,366

NOTE 10. CONTINGENCIES

From time to time the Company may be involved in claims arising in connection with its business. Based on information currently available, management believes that the amount, or range, of reasonably possible losses in connection with any pending actions against the Company will not be material to the Company's financial condition or cash flows, and no contingent liabilities were accrued as of March 31, 2020 or 2019.

NOTE 11. INCOME TAXES

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act") was signed into law. The CARES Act includes, among other features, provisions relating to refundable payroll tax credits, deferment of employer side social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. While the Company continues to evaluate the impact of the CARES Act, it does not expect the provisions of the legislation to have a significant impact on the effective tax rate or on the income tax provision or deferred income tax positions of the Company.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the condensed financial statements and notes thereto included elsewhere in this report and with the audited financial statements and related notes thereto included as part of our Annual Report on Form 10-K for the year ended December 31, 2019. This discussion and analysis and other parts of this report contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section of this report entitled "Risk Factors". These forward-looking statements speak only as of the date hereof. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason. Unless the context requires otherwise, the terms "Ardelyx", "Company", "we", "us", and "our" refer to Ardelyx, Inc.

About Ardelyx

We are a specialized biopharmaceutical company focused on developing innovative first-in-class medicines to improve treatment for people with kidney and cardiovascular diseases. This includes patients with chronic kidney disease ("CKD") on dialysis suffering from elevated serum phosphorus ("hyperphosphatemia") and patients with CKD and/or heart failure patients with elevated serum potassium ("hyperkalemia").

Our portfolio is led by the development of tenapanor, a first-in-class medicine for the control of serum phosphorus in patients with CKD on dialysis, for which we have completed the Phase 3 clinical program and currently expect to submit a New Drug Application ("NDA") to the United States Food and Drug Administration ("FDA") in mid-2020. Tenapanor for the control of serum phosphorus has a unique mechanism of action and acts locally in the gut to inhibit the sodium hydrogen exchanger 3 ("NHE3"). This results in the tightening of the epithelial cell junctions, thereby significantly reducing paracellular uptake of phosphate, the primary pathway of phosphate absorption.

We have evaluated tenapanor in a Phase 3 program for the control of serum phosphorus in CKD patients on dialysis. In December 2019, we reported statistically significant topline efficacy results from our second monotherapy Phase 3 clinical trial, the PHREEDOM trial. The PHREEDOM trial followed a successful monotherapy Phase 3 clinical trial completed in 2017, which achieved statistical significance for the primary endpoint. PHREEDOM is a one-year study with a 26-week open-label treatment period and a 12-week double-blind, placebo-controlled randomized withdrawal period followed by a 14-week open-label safety extension period. An active safety control group, for safety analysis only, received sevelamer, open-label, for the entire 52-week study period. Patients completing the PHREEDOM trial from both the tenapanor arm and the sevelamer active safety control arm had the option to participate in NORMALIZE, an ongoing open-label 18-month extension study. The goal of the NORMALIZE study is to further our understanding of the potential for the dual mechanism of tenapanor and sevelamer to reduce serum phosphorus levels towards normal (<4.6 mg/dL) while minimizing medication burden. In addition, in September 2019, we reported positive results from the AMPLIFY trial, a Phase 3 study evaluating tenapanor in patients with CKD on dialysis who had uncontrolled hyperphosphatemia despite phosphate binder treatment.

Tenapanor, if approved, would be the first therapy for phosphate management that is not a phosphate binder. As tenapanor is a novel, potent, small molecule that is dosed as a single pill, twice-daily, we believe, tenapanor could greatly improve patient adherence and compliance and free patients from having to take multiple pills before every meal.

We are also advancing a small molecule potassium secretagogue program, RDX013, for the potential treatment of hyperkalemia. Hyperkalemia is a common problem in patients with heart and kidney disease, particularly in patients taking common blood pressure medications known as renin-angiotensin-aldosterone system ("RAAS") inhibitors. Similar to what we have done with tenapanor in developing a non-binder approach for the treatment of elevated serum phosphate levels, RDX013 is designed to offer a non-binder alternative to lowering elevated potassium with a much lower pill burden than potassium binders and we believe may provide significant advantages as a stand-alone agent or in combination with potassium binders.

In addition to the development of tenapanor for hyperphosphatemia, we have developed tenapanor for the treatment of patients with irritable bowel syndrome with constipation (“IBS-C”). In September 2019, we received FDA approval of IBSRELA® (tenapanor) for the treatment of IBS-C in adults. IBS-C is a burdensome gastrointestinal (“GI”) disorder affecting a significant number of people. It is characterized by significant abdominal pain, constipation, straining during bowel movements, bloating and/or gas.

IBSRELA (tenapanor) is a locally acting inhibitor of NHE3, an antiporter expressed on the apical surface of the small intestine and colon primarily responsible for the absorption of dietary sodium. By inhibiting NHE3 on the apical surface of the enterocytes, tenapanor reduces absorption of sodium from the small intestine and colon, resulting in an increase in water secretion into the intestinal lumen, which accelerates intestinal transit time and results in a softer stool consistency.

We have developed a proprietary drug discovery and design platform to discover targets found in the GI tract that regulate processes in the body and design product candidates that act upon those targets to take advantage of the gut’s ability to communicate with other organs.

Since commencing operations in October 2007, substantially all our efforts have been dedicated to our research and development (“R&D”) activities, including developing our clinical product candidate tenapanor and developing our proprietary drug discovery and design platform. We have not generated any revenues from product sales. As of March 31, 2020, we had an accumulated deficit of $482.8 million.

We expect to continue to incur substantial operating losses for the foreseeable future as a result of costs associated with the following activities: our continued development of tenapanor for the control of serum phosphorus in CKD patients on dialysis; the preparation of the NDA to seek marketing approval in the United States for tenapanor for the control of serum phosphorus in patients with CKD on dialysis; our preparations for the commercialization of tenapanor in the United States for the control of serum phosphorus in CKD patients on dialysis, including significant increased personnel costs associated with building out our commercial team; the performance of certain activities required as a result of our NDA approval of tenapanor for IBS-C, including costs associated with conducting the pediatric clinical trials for IBS-C; and the advancement of our research programs into the preclinical stage. To date, we have funded our operations from the sale and issuance of common stock and convertible preferred stock, funds from our collaboration partnerships, and funds from our Loan Agreement with Solar Capital Ltd. and Western Alliance Bank.

Critical Accounting Policies and Significant Judgments and Estimates

Our discussion and analysis of financial condition and results of operations is based on our condensed financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. Critical accounting policies are those that require significant judgment and/or estimates by management at the time that financial statements are prepared such that materially different results might have been reported if other assumptions had been made. These estimates form the basis for making judgments about the carrying values of assets and liabilities. We base our estimates and judgments on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates.

The critical accounting policies that we believe impact significant judgments and estimates used in the preparation of our financial statements presented in this report are described in Part II, Item 7, *Management’s Discussion and Analysis of Financial Condition and Results of Operations*, in our Annual Report on Form 10-K filed with the SEC on March 6, 2020. There have been no significant changes to our critical accounting policies as disclosed in our most recently filed Annual Report on Form 10-K during the three months ended March 31, 2020.

Recent Accounting Pronouncements

A summary of recent accounting pronouncements that we have adopted or may expect to adopt is included in Note 2 – Description of Business and Basis of Presentation to our condensed financial statements (see Part I, Item 1 *Condensed Financial Statements*, of this Quarterly Report on Form 10-Q).

Financial Operations Overview

Revenue

Our revenue to date has been generated primarily through license, research and development collaborative agreements with various collaboration partners. We have not generated any revenue from product sales. In the future, we may generate revenue from a combination of license fees and other upfront payments, milestone payments, product sales and royalties in connection with our current or future collaborative partnerships. We expect that any revenue we generate will fluctuate in future periods as a result of, among other factors: the timing and progress of goods and services provided pursuant to our current or future collaborative partnerships; our or our collaborators' achievement of preclinical, clinical, regulatory or commercialization milestones, to the extent achieved; the timing and amount of any payments to us relating to the aforementioned milestones; and the extent to which any of our product candidates are approved and successfully commercialized by us or a collaboration partner. If we, our current collaboration partners or any future collaboration partners fail to develop product candidates in a timely manner or to obtain regulatory approval for product candidates, our ability to generate future revenue from collaborative arrangements, and our results of operations and financial position, would be materially and adversely affected. Our past revenue performance is not necessarily indicative of results to be expected in future periods.

Research and Development Expenses

We recognize all R&D expenses as they are incurred to support the discovery, research, development and manufacturing of our product candidates. R&D expenses include, but are not limited to, the following:

- external R&D expenses incurred under agreements with consultants, third-party contract research organizations and investigative sites where a substantial portion of our clinical studies are conducted, and with contract manufacturing organizations where our clinical supplies are produced;

- employee-related expenses, which include salaries, bonuses, benefits, travel and stock-based compensation;

- facilities and other allocated expenses, which include direct and allocated expenses for rent and maintenance of facilities, depreciation and amortization expense and information technology expenses;.

- expenses associated with supplies and materials consumed in connection with our research operations; and

- other costs associated with regulatory, clinical and non-clinical development activities.

We expect to continue to make substantial investments in research and development activities as we further progress the development of tenapanor, as well as our other product candidates, as we advance our research programs into the preclinical stage and as we continue our early stage research. The process of conducting preclinical studies and clinical trials necessary to obtain regulatory approval is costly and time-consuming. We may not succeed in achieving marketing approval for all of our product candidates, including tenapanor for the control of serum phosphorus. Additionally, with respect to the marketing approval received in the United States for tenapanor for the treatment of IBS-C, we may not be successful in securing one or more collaboration partners to commercialize tenapanor in the United States or in other territories. The probability of success of each of the product candidates may be affected by numerous factors, including preclinical data, clinical data, market acceptance, sufficient third-party coverage or reimbursement, our ability to access capital on acceptable terms, competition, manufacturing capability and commercial viability.

We anticipate that we will make determinations as to which programs to pursue and how much funding to direct to each program on an ongoing basis in response to the scientific and clinical success of each product candidate, ongoing assessment as to each product candidate's commercial potential, and our ability to access capital on acceptable terms. We will need to raise additional capital and will seek additional collaboration partnerships in order to complete the development and commercialization of tenapanor. If we are unable to access capital on a timely basis and on terms that are acceptable to us, we may be forced to restructure certain aspects of our business or identify and complete one or more strategic collaborations or other transactions in order to fund the development or commercialization of tenapanor or certain of our product candidates through the use of alternative structures.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related benefits, including stock-based compensation, for our executive, board, finance, legal, business development, market development, commercial and support staff. Other general and administrative expenses include facility related costs and professional fees for legal, accounting and audit, investor relations, other consulting services and allocated facility-related costs not otherwise included in research and development expenses.

We anticipate that our general and administrative expenses will increase in the future primarily because of increased pre-commercial activities, personnel costs and professional fees for services to support the potential launch and commercialization of tenapanor for the control of serum phosphorus in CKD patients on dialysis.

Interest Expense

Interest expense represents the interest paid on our loan payable.

Other Income, net

Other income consists of interest income earned on our cash and cash equivalents and held-to-maturity investments, the periodic revaluation of the exit fee related to our loan and currency exchange gains and losses.

Income Taxes

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act") was signed into law. The CARES Act includes, among other features, provisions relating to refundable payroll tax credits, deferment of employer side social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. While we continue to evaluate the impact of the CARES Act, we do not expect the provisions of the legislation to have a significant impact on the effective tax rate or on the income tax provision or deferred income tax positions of the Company.

RESULTS OF OPERATIONS

Comparison of the three months ended March 31, 2020 and 2019

The following table summarizes the results of our operations for the periods indicated (amounts in thousands, except percentages):

	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	$ Change	% Change
Revenues:				
Collaborative development revenue	$ 1,175	$ —	$ 1,175	* %
Other revenue	38	—	38	* %
Total revenues	1,213	—	1,213	* %
Operating expenses:				
Research and development	15,844	20,381	(4,537)	(22.3) %
General and administrative	7,138	5,117	2,021	39.5 %
Total operating expenses	22,982	25,498	(2,516)	(9.9) %
Loss from operations	(21,769)	(25,498)	3,729	(14.6) %
Interest expense	(1,357)	(1,434)	77	(5.4) %
Other income, net	753	790	(37)	(4.7) %
Loss before provision for income taxes	(22,373)	(26,142)	3,769	(14.4) %
Provision for income taxes	—	2	(2)	(100.0) %
Net loss	$ (22,373)	$ (26,144)	$ 3,771	(14.4) %

* Not meaningful

The results of operations are not necessarily indicative of the results to be expected for the year ended December 31, 2020, for any other interim period, or for any other future year.

Revenue

Total revenue was $1.2 million for the three months ended March 31, 2020, an increase of $1.2 million compared to zero for the three months ended March 31, 2019. This increase was primarily attributable to higher collaborative development revenue recognized in connection with the research collaboration and option agreement entered into in December 2019 with Kyowa Kirin Co., Ltd. (“KKC”) (the “2019 KKC Agreement”). The initial transaction price of $10.0 million is being recognized as services are provided using an input method. As of March 31, 2020, the remaining unamortized initial transaction price totaled $8.3 million, and we currently expect this amount will be recognized through the end of 2021.

Research and Development Expenses

The following table presents our research and development (“R&D”) expenses incurred during the periods indicated (in thousands):

	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	$ Change	% Change
External R&D expenses	$ 9,197	$ 14,293	$ (5,096)	(35.7) %
Employee-related expenses	4,994	4,599	395	8.6 %
Facilities, equipment and depreciation expenses	1,593	1,418	175	12.3 %
Other	60	71	(11)	(15.5) %
Total	$ 15,844	$ 20,381	$ (4,537)	(22.3) %

The decrease in our external R&D expenses primarily include a $5.1 million decrease in our tenapanor-related expenses, as well as a $0.8 million decrease in our RDX013 program-related expenses, partially offset by $0.8 million of higher expenses attributable to 2019 KKC Agreement-related and general R&D expenses. Of the overall tenapanor-related decrease, approximately $4.1 million relates to lower clinical study costs and approximately $1.4 million relates to lower manufacturing expenses.

General and Administrative Expenses

The increase in general and administrative expenses was primarily due to an increase in headcount and related personnel costs, including stock-based compensation costs related to option vesting and performance-based restricted stock units, severance expenses related to our former chief financial officer and an increase in professional services.

Liquidity and Capital Resources

Our primary sources of cash have been from the sale and issuance of common stock, public offerings, private placement and convertible preferred stock, funds from our collaboration partnerships, and funds from our loan agreement. Our primary uses of cash are to fund operating expenses, primarily research and development expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable and accrued expenses.

As of March 31, 2020 and December 31, 2019, our cash, cash equivalents and short-term investments were as follows (in thousands):

	March 31, 2020	December 31, 2019
Cash and cash equivalents	$105,895	$ 181,133
Short-term investments	117,312	66,379
Total liquid funds	$223,207	$ 247,512

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Three Months Ended March 31, 2020	2019
Cash used in operating activities	$ (24,946)	$ (16,913)
Cash (used in) provided by investing activities	(50,883)	29,981
Cash provided by financing activities	591	200
Net (decrease) increase in cash and cash equivalents	$ (75,238)	$ 13,268

Cash Flows from Operating Activities

Net cash used in operating activities during the three months ended March 31, 2020 was $24.9 million, as compared to $16.9 million for the three months ended March 31, 2019. The $8.0 million increase is primarily attributable to:

- a $5.1 million decrease in cash received from collaboration partners during the three months ended March 31, 2020 as compared to payments received during the three months ended March 31, 2019;

- a $4.9 million decrease in cash R&D expenses (excluding working capital-related fluctuations) during the three months ended March 31, 2020, as compared to the three months ended March 31, 2019;

- a $1.4 million increase in cash G&A expenses (excluding working capital-related fluctuations) during the three months ended March 31, 2020, as compared to the three months ended March 31, 2019; and

- a $6.7 million net increase in cash used related to fluctuations in components of our non-revenue-related working capital during the three months ended March 31, 2020, as compared to the three months ended March 31, 2019, that comprised of net increases of $1.2 million, $2.0 million, $1.4 million, $0.6 million and $1.5 million in cash used related to fluctuations in our prepaid expenses and other assets, accounts payable, accrued compensation and benefits, lease liabilities, and non-payroll-related accruals and other current liabilities, respectively.

Cash Flows from Investing Activities

Net cash used in investing activities was $50.9 million for the three months ended March 31, 2020, as compared to cash provided by investing activities of $30.0 million for the three months ended March 31, 2019. The $80.9 million increase in net cash used in investing activities was primarily attributable to a $51.0 million decrease in proceeds from maturities of investments and a $30.0 million increase in purchases of short-term available-for-sale investments.

Funding Requirements

We believe that our existing capital resources as of March 31, 2020 will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months following our financial statement issuance date. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. In particular, our operating plan can change, and we may require significant additional capital to fund our operations, including to support the development, commercialization and manufacturing efforts for tenapanor. We may seek to obtain such additional capital through debt financings, credit facilities, additional equity offerings and/or strategic collaborations. We currently have no unutilized credit facility or committed sources of capital, and there can be no assurances that such sources of capital will be available to us when needed or on acceptable terms. There are numerous risks and uncertainties associated with research, development and commercialization initiatives, and actual results could vary materially as a result of a number of factors, many of which are outside of our control. Our future capital requirements are difficult to forecast and will depend on many factors, including:

- the preparation and submission of an NDA with the FDA to request marketing authorization for tenapanor for the control of serum phosphorus in CKD patients on dialysis;
- our ability to identify a collaboration partner and negotiate acceptable terms for a collaboration partnership for the commercialization of tenapanor in IBS-C in the United States;
- our ability to successfully commercialize tenapanor for the control of serum phosphorus in CKD patients on dialysis, if approved, either alone or with one or more collaboration partners;
- the manufacturing costs of our product candidates, and the availability of one or more suppliers for our product candidates at reasonable costs, both for clinical and commercial supply;
- the selling and marketing costs associated with tenapanor, including the cost and timing of building our sales and marketing capabilities;
- our ability to maintain our existing collaboration partnerships and to establish additional collaboration partnerships, in-license/out-license, joint ventures or other similar arrangements and the financial terms of such agreements;
- the timing, receipt, and amount of sales of, or royalties on, tenapanor, if any;
- the sales price and the availability of adequate third-party reimbursement for tenapanor, if approved;
- the cash requirements of any future acquisitions or discovery of product candidates;

- the number and scope of preclinical and discovery programs that we decide to pursue or initiate, and any clinical trials we decide to pursue for other product candidates, including RDX013;
- the time and cost necessary to respond to technological and market developments;
- the costs of filing, prosecuting, maintaining, defending and enforcing any patent claims and other intellectual property rights, including litigation costs and the outcome of such litigation, including costs of defending any claims of infringement brought by others in connection with the development, manufacture or commercialization of tenapanor or any of our product candidates; and
- the payment of interest and principal related to our loan and security agreement entered into with Solar Capital and Western Alliance Bank in May 2018.

Please see the risk factors set forth in Part II, Item 1A, *Risk Factors*, in this Quarterly Report on Form 10-Q for additional risks associated with our capital requirements.

Off-Balance Sheet Arrangements

None.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk. We are subject to market risks, including interest rate fluctuation exposure through our investments, in the ordinary course of our business. However, the goals of our investment policy are the preservation of capital, fulfillment of liquidity needs and fiduciary control of cash. To achieve our goal of maximizing income without assuming significant market risk, we maintain our excess cash and cash equivalents in money market funds and short-term debt securities. Because of the short-term maturities of our cash equivalents, we do not believe that a decrease in interest rates would have any material negative impact on the fair value of our cash equivalents.

As of March 31, 2020, we had cash, cash equivalents and short-term investments of $223.2 million, which consist of bank deposits and money market funds, as well as high quality fixed income instruments including corporate bonds, commercial paper, and asset-backed securities collateralized by non-mortgage consumer receivables. The credit rating of our short-term investments must be rated A-1/P-1, or better by Standard and Poor's and Moody's Investors Service. Asset-backed securities must be rated AAA/Aaa. Money Market funds must be rated AAAm/Aaa. Such interest-earning instruments carry a degree of interest rate risk. However, because our investments are high quality and short-term in duration, we believe that our exposure to interest rate risk is not significant and that a 10% movement in market interest rates would not have a significant impact on the total value of our portfolio, as noted above. We do not enter into investments for trading or speculative purposes.

We are subject to interest rate fluctuation exposure through our borrowings under the Loan Agreement and our investment in money market accounts which bear a variable interest rate. Borrowings under the Loan Agreement bear interest at a rate equal to one-month London Interbank Offered Rate ("LIBOR"), plus 7.45% per annum. A hypothetical increase in one-month LIBOR of 100 basis points above the current one-month LIBOR rates would have increased our interest expense by approximately $0.2 million for the three months ended March 31, 2020. As of March 31, 2020, we had an aggregate principal amount of $50.2 million outstanding pursuant to our Loan Agreement.

Foreign Currency Risk. The majority of our transactions are denominated in U.S. dollars. However, we do have certain transactions that are denominated in currencies other than the U.S. dollar, primarily Swiss francs and the euro, and we therefore are subject to foreign exchange risk. The fluctuation in the value of the U.S. dollar against other currencies affects the reported amounts of expenses, assets and liabilities associated with a limited number of manufacturing activities.

We do not use derivative financial instruments for speculative trading purposes, nor do we hedge foreign currency exchange rate exposure in a manner that entirely offsets the earnings effects of changes in foreign currency exchange rates.

The counterparties to our forward foreign currency exchange contracts are creditworthy commercial banks, which minimizes the risk of counterparty nonperformance.

As of March 31, 2020, we had no open forward foreign currency exchange contracts.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), our management, under the supervision and with the participation of our principal executive officer and principal accounting and financial officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of March 31, 2019. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on such evaluation, our principal executive officer and principal accounting and financial officer have concluded that, as of March 31, 2020, our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended March 31, 2020, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We have not experienced any material impact to our internal controls over financial reporting, despite the fact that most of our employees are working remotely due to the COVID-19 pandemic. We are continually monitoring and assessing the COVID-19 situation to minimize the impact on the design and operating effectiveness of our internal controls over financial reporting.

Inherent Limitations on Effectiveness of Controls

Internal control over financial reporting has inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we may be involved in legal proceedings arising in the ordinary course of business. As of March 31, 2020, there is no litigation pending that would reasonably be expected to have a material adverse effect on our results of operations and financial condition, and no contingent liabilities were accrued as of March 31, 2020.

ITEM 1A. RISK FACTORS

Our business involves significant risks, some of which are described below. You should carefully consider these risks, as well as other information in this Quarterly Report on Form 10-Q, including our condensed financial statements and the notes thereto and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations, cash flows, the trading price of our common stock and our growth prospects. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

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

We have a limited operating history, have incurred significant losses since our inception and we will incur losses in the future, which makes it difficult to assess our future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history. Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. To date, we have focused substantially all of our efforts on our research and development activities, including developing tenapanor and developing our proprietary drug discovery and design platform. To date, we have not commercialized any products or generated any revenue from the sale of products.

We are not profitable and have incurred losses in each year since our inception in October 2007, and we do not know whether or when we will become profitable. We have only a limited operating history upon which to evaluate our business and prospects. We continue to incur significant research, development and other expenses related to our ongoing operations. As of March 31, 2020, we had an accumulated deficit of $482.8 million.

We expect to continue incur substantial operating losses for the foreseeable future as we prepare for the potential commercialization of, and incur manufacturing and development costs for, tenapanor, including costs associated with preparing the new drug application ("NDA") for submission to the U.S. Food and Drug Administration ("FDA") to request marketing authorization for tenapanor for the control of serum phosphorus in chronic kidney disease ("CKD") patients on dialysis, commercializing tenapanor for that indication, and continuing our discovery and research activities.

Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital. Further, the net losses we incur may fluctuate significantly from quarter-to-quarter and year-to-year, such that a period-to-period comparison of our results of operations may not be a good indication of our future performance.

We have substantial net operating loss and tax credit carryforwards for Federal and California income tax purposes. Such net operating losses and tax credits carryforwards may be reduced as a result of certain intercompany restructuring transactions. In addition, the future utilization of such net operating loss and tax credit carryforwards and credits will be subject to limitations, pursuant to Internal Revenue Code Sections 382 and 383, as a result of ownership changes that have occurred previously and additional limitations may be applicable as a result of ownership changes that could occur in the future.

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

We received FDA approval for our NDA for tenapanor for the treatment of irritable bowel syndrome with constipation ("IBS-C") in adults in September 2019. However, we do not currently expect to commercialize tenapanor for IBS-C ourselves in the United States and have not entered into a collaboration partnership for such commercialization. We have no other products approved for sale and have never generated any revenue from product sales. Our ability to generate revenue from product sales and achieve profitability depends on our ability to obtain the regulatory and marketing approvals necessary to commercialize tenapanor for the control of serum phosphorus in CKD patients on dialysis, either on our own or with one or more collaboration partners, and on our ability to successfully identify a collaboration partner for the commercialization of tenapanor for the treatment of IBS-C in the United States. There can be no assurances that we will generate product revenue from sales of tenapanor, either on our own, or with a collaboration partner. Our ability to generate future revenue from product sales or pursuant to milestone payments depends heavily on many factors, including but not limited to:

- obtaining regulatory approvals for tenapanor for the control of serum phosphorus in CKD patients on dialysis, either on our own or with one or more collaboration partners;

- our ability to identify a collaboration partner and negotiate acceptable terms for a collaboration partnership for the commercialization of tenapanor for IBS-C in the United States;

- our ability to successfully commercialize tenapanor, which has been approved by the FDA for the treatment of IBS-C in adults, and/or tenapanor for the control of serum phosphorus in CKD patients on dialysis, if approved, either on our own or with one or more collaboration partners;

- developing a sustainable and scalable manufacturing process for tenapanor and establishing and maintaining supply and manufacturing relationships with third parties that can provide an adequate (in amount and quality) supply of product to support the market demand for tenapanor for the treatment of IBS-C, and/or, if approved, tenapanor for the control of serum phosphorus in CKD patients on dialysis;

- obtaining market acceptance of tenapanor as a viable treatment option for the indications for which it is approved and commercialized;

- addressing any competing technological and market developments;

- identifying, assessing, acquiring, in-licensing and/or developing new product candidates;

- negotiating favorable terms in any collaboration partnership, licensing or other arrangements into which we may enter;

- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets, and know-how, and our ability to develop, manufacture and commercialize our product candidates and products without infringing intellectual property rights of others; and

- attracting, hiring, and retaining qualified personnel.

In cases where we are successful in obtaining regulatory approvals to market tenapanor for one or more indications, our revenue will be dependent, in part, upon the size of the markets in the territories for which regulatory approval is granted, our ability to identify a collaboration partner and negotiate acceptable terms for a collaboration partnership for the commercialization of tenapanor for the IBS-C indication in the United States, the accepted price for the product, the ability to get reimbursement at any price and whether we are commercializing the product or the product is being commercialized by a collaboration partner, and in such case, whether we have royalty and/or co-promotion rights for that territory, and whether any royalty we have a right to receive from a collaboration partner is in excess of the royalty we owe AstraZeneca as a result of the termination of our License Agreement with AstraZeneca in 2015. See NOTE 9, COLLABORATION AND LICENSING AGREEMENTS, in the notes to our financial statements, included in Part II, Item 8, of our most recent Annual Report on Form 10-K, for details on our obligations to AstraZeneca. While there is significant uncertainty related to the insurance coverage and reimbursement of newly approved products in general in the United States, there is additional uncertainty related to insurance coverage and reimbursement for drugs, like tenapanor, which, if approved, will be marketed for the control of serum phosphorus in CKD patients on dialysis. If we are successful in obtaining regulatory approval to market tenapanor for the control of serum phosphorus in CKD patients on dialysis, our ability to generate and sustain future revenues from sales of tenapanor for such indication, may be dependent upon whether tenapanor, along with other oral only drugs for CKD patients on dialysis, are bundled into the end-stage renal disease (“ESRD”) prospective payment system beginning in 2025, and the manner in which such introduction into the ESRD prospective payment system may occur. See “***Third-party payor coverage and reimbursement status of newly-approved products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for our products, if approved, could limit our ability to market those products and decrease our ability to generate revenue”*** below**.** Additionally, if the number of patients suitable for tenapanor is not as significant as we estimate, the indication approved by regulatory authorities is narrower than we expect, coverage and reimbursement for tenapanor are not available in the manner and to the extent which we expect, or the reasonably accepted population for treatment is narrowed by competition, physician choice or treatment guidelines, we may not generate significant revenue from the sale of tenapanor, even if approved. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to generate revenue from product sales would likely depress our market value and could impair our ability to raise capital, expand our business, discover or develop other product candidates or continue our operations. A decline in the value of our common stock could cause our stockholders to lose all or part of their investment.

Our operating activities may be restricted as a result of covenants related to the indebtedness under our loan and security agreement and we may be required to repay the outstanding indebtedness in an event of default, which could have a materially adverse effect on our business.

On May 16, 2018, we entered into a loan and security agreement with Solar Capital, Ltd. and Western Alliance Bank (collectively the "Lenders") pursuant to which the Lenders agreed to provide us a $50.0 million term loan facility with a maturity date of November 1, 2022. The full amount of the loan was funded on May 16, 2018. Until we have repaid such indebtedness, the loan and security agreement subjects us to various customary covenants, including requirements as to financial reporting and insurance and restrictions on our ability to dispose of our business or property, to change our line of business, to liquidate or dissolve, to enter into any change in control transaction, to merge or consolidate with any other entity or to acquire all or substantially all the capital stock or property of another entity, to incur additional indebtedness, to incur liens on our property, to pay any dividends or other distributions on capital stock other than dividends payable solely in capital stock, to redeem capital stock, to enter into licensing agreements, to engage in transactions with affiliates, and to encumber our intellectual property. Our business may be adversely affected by these restrictions on our ability to operate our business.

We are permitted to make interest only payments on the loan facility through December 1, 2020. However, we may be required to repay the outstanding indebtedness under the loan facility if an event of default occurs under the loan and security agreement. An event of default will occur if, among other things, we fail to make payments under the loan and security agreement; we breach any of our covenants under the loan and security agreement, subject to specified cure periods with respect to certain breaches; the Lenders determine that a material adverse change has occurred; we or our assets become subject to certain legal proceedings, such as bankruptcy proceedings; we are unable to pay our debts as they become due; or we default on contracts with third parties which would permit the Lenders to accelerate the maturity of such indebtedness or that could have a material adverse change on us. We may not have enough available cash or be able to raise additional funds through equity or debt financings to repay such indebtedness at the time any such event of default occurs. In this case, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts or grant to others' rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. The Lenders could also exercise their rights as collateral agent to take possession of and to dispose of the collateral securing the term loans, which collateral includes substantially all of our property (excluding intellectual property, which is subject to a negative pledge). Our business, financial condition and results of operations could be materially adversely affected as a result of any of these events.

We will require substantial additional financing to achieve our goals, and the inability to access this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our pre-commercialization efforts for tenapanor and our other product development and platform development activities.

Since our inception, most of our resources have been dedicated to our research and development activities, including developing our clinical product candidate tenapanor and developing our proprietary drug discovery and design platform. We believe that we will continue to expend substantial resources for the foreseeable future, including costs associated with the preparation and submission of the NDA for, and, if approved, the commercialization of tenapanor for the control of serum phosphorus in CKD patients on dialysis, research and development, conducting preclinical studies and clinical trials for our other programs, obtaining regulatory approvals, developing and maintaining scalable manufacturing processes for our product candidates and sales and marketing. Because the outcome of any clinical trial and/or regulatory approval process is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development, regulatory approval process and commercialization or co-promotion of any of our product candidates. Our future funding requirements will depend on many factors, including, but not limited to:

- the preparation and submission of an NDA to the FDA to request marketing authorization for tenapanor for the control of serum phosphorus in CKD patients on dialysis;

- our ability to identify a collaboration partner and negotiate acceptable terms for a collaboration partnership for the commercialization of tenapanor in IBS-C in the United States;

- our ability to successfully commercialize tenapanor, which has been approved by the FDA for the treatment of IBS-C in adults, with one or more collaboration partners; and, our ability to successfully commercialize tenapanor for the control of serum phosphorus in CKD patients on dialysis, if approved, either alone or with one or more collaboration partners;

- the manufacturing costs of our product candidates, and the availability of one or more suppliers for our product candidates at reasonable costs, both for clinical and commercial supply;

- the selling and marketing costs associated with tenapanor, including the cost and timing of building our sales and marketing capabilities;

- our ability to maintain our existing collaboration partnerships and to establish additional collaboration partnerships, in-license/out-license, joint ventures or other similar arrangements and the financial terms of such agreements;

- the timing, receipt, and amount of sales of, or royalties on, tenapanor, if any;

- the sales price and the availability of adequate third-party reimbursement for tenapanor, if approved;

- the cash requirements of any future acquisitions or discovery of product candidates;

- the number and scope of preclinical and discovery programs that we decide to pursue or initiate, and any clinical trials we decide to pursue for other product candidates, including RDX013;

- the time and cost necessary to respond to technological and market developments;

- the costs of filing, prosecuting, maintaining, defending and enforcing any patent claims and other intellectual property rights, including litigation costs and the outcome of such litigation, including costs of defending any claims of infringement brought by others in connection with the development, manufacture or commercialization of tenapanor or any of our product candidates; and

- the payment of interest and principal related to our loan and security agreement entered into with Solar Capital Ltd. and Western Alliance Bank during May 2018.

Additional funds may not be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to delay, limit, reduce or terminate our research activities, preclinical and clinical trials for our product candidates and our establishment and maintenance of sales and marketing capabilities or other activities that may be necessary to commercialize tenapanor, either alone or with collaboration partners. Additionally, our inability to access capital on a timely basis and on terms that are acceptable to us may force us to restructure certain aspects of our business or identify and complete one or more strategic collaborations or other transactions in order to fund the development or commercialization of tenapanor or certain of our product candidates through the use of alternative structures.

Risks Related to Our Business

We are substantially dependent on the success of our lead product candidate, tenapanor, which may not receive regulatory approval for the control of serum phosphorus or be successfully commercialized for IBS-C or hyperphosphatemia.

To date, we have invested a significant amount of our efforts and financial resources in the research and development of tenapanor, which is currently our lead product candidate. The clinical and commercial success of tenapanor will depend on a number of factors, including the following:

- our ability to, in a timely manner and under terms that are acceptable to us, establish a collaboration partnership for the commercialization of tenapanor for the treatment of IBS-C in the United States;
- the ability of the third-party manufacturers we contract with to successfully execute and scale up the manufacturing processes for tenapanor, which has not yet been fully demonstrated, and to manufacture supplies of tenapanor and to develop, validate and maintain commercially viable manufacturing processes that are compliant with cGMP requirements;
- whether the FDA requires us to conduct clinical trials in addition to those anticipated prior to approval to market tenapanor for the control of serum phosphorus, which could delay the commercialization of tenapanor for the control of serum phosphorus in CKD patients on dialysis in the U.S;
- whether or not the content of the label approved by the FDA or foreign regulatory authorities may materially and adversely impact our ability the ability of our collaboration partners to commercialize the product for the approved indication, or for any other indication;
- whether we will be required to conduct clinical trials in addition to those anticipated to obtain adequate commercial pricing;
- the prevalence and severity of adverse side effects of tenapanor;
- whether tenapanor’s safety and efficacy profile is satisfactory to the FDA and foreign regulatory authorities to gain marketing approval for the control of serum phosphorus;
- the timely receipt of necessary marketing approvals from the FDA and foreign regulatory authorities;
- our ability, either alone, or with a collaboration partner, to successfully commercialize tenapanor, if approved for marketing and sale by the FDA or foreign regulatory authorities, including educating physicians and patients about the benefits, administration and use of tenapanor;
- achieving and maintaining compliance with all regulatory requirements applicable to tenapanor;
- acceptance of tenapanor as safe, effective and well-tolerated by patients and the medical community;
- our ability, alone or with collaboration partners, to manage the complex pricing and reimbursement negotiations associated with marketing the same product at different doses for separate indications for tenapanor for the treatment of IBS-C, and, if approved, for the control of serum phosphorus in CKD patients on dialysis;
- the availability, perceived advantages, relative cost, relative safety and relative efficacy of tenapanor compared to alternative and competing treatments;

- obtaining and sustaining an adequate level of coverage and reimbursement for tenapanor by third-party payors;
- enforcing intellectual property rights in and to tenapanor;
- avoiding third-party interference, opposition, derivation or similar proceedings with respect to our patent rights, and avoiding other challenges to our patent rights and patent infringement claims; and
- a continued acceptable safety and tolerability profile of tenapanor following approval.

As tenapanor is a first-in-class drug, there is a higher likelihood that approval may not be attained as compared to a class of drugs with approved products. Although tenapanor met the primary endpoints in all of the three Phase 3 clinical trials evaluating tenapanor for the control of serum phosphorus in CKD patients on dialysis, there can be no assurances that we will receive regulatory approval to market tenapanor for the control of serum phosphorus in CKD patients on dialysis. Further, it may not be possible or practicable to demonstrate, or if approved, to market tenapanor on the basis of certain of the benefits we believe tenapanor possesses. If the number of patients in the market for tenapanor or the price that the market can bear is not as significant as we estimate, or if we are not able to secure adequate coverage and reimbursement for tenapanor, we may not generate sufficient revenue from sales of tenapanor for the control of serum phosphorus, if approved, or for IBS-C. Additionally, we may not be successful in establishing a collaboration partnership for the commercialization of tenapanor for the treatment of IBS-C in the United States in a timely manner and under terms that are acceptable to us. Accordingly, there can be no assurance that tenapanor will ever be successfully commercialized or that we will ever generate income from sales of tenapanor. If we are not successful in completing the NDA submission for, and obtaining approval for, tenapanor for the control of serum phosphorus, or we are not successful in commercializing tenapanor, or are significantly delayed in doing so, our business will be materially harmed.

Even if we are successful in obtaining regulatory approval for tenapanor for the control of serum phosphorus, and tenapanor is ultimately commercialized for any approved indications, tenapanor may never achieve market acceptance, sufficient third-party coverage or reimbursement, or commercial success, which will depend, in part, upon the degree of acceptance among physicians, patients, patient advocacy groups, health care payors and the medical community.

Even if we are successful in obtaining regulatory approval for tenapanor for the control of serum phosphorus, and tenapanor is ultimately commercialized for any approved indications, tenapanor may not achieve market acceptance among physicians, patients, third-party payors, patient advocacy groups, and the medical community. Market acceptance of tenapanor, in the event that marketing approval is obtained, depends on a number of factors, including:

- with respect to tenapanor for IBS-C in the United States, our ability to obtain a collaboration partner for commercialization and the strength of such collaboration partner's financial resources and marketing and distribution organizations, as well as the commitment of such collaboration partner's sales organization to tenapanor;
- the efficacy demonstrated in our clinical trials;
- with respect to tenapanor for the control of serum phosphorus, whether tenapanor, along with other oral only medications, are included in the bundled prospective payment system for the treatment of ESRD patients, and the manner in which such transition is achieved;
- the prevalence and severity of any side effects and overall safety and tolerability profile of the product;
- the clinical indications for which it is approved;
- advantages over new or traditional or existing therapies, including recently approved therapies or therapies that the physician community anticipate will be approved;

- acceptance by physicians, major operators of clinics and patients of tenapanor as a safe, effective and well-tolerated treatment;
- relative convenience and ease of administration of tenapanor;
- the potential and perceived advantages of tenapanor over current treatment options or alternative treatments, including future alternative treatments;
- the cost of treatment in relation to alternative treatments and the willingness to pay for tenapanor, if approved, on the part of physicians and patients;
- the availability of alternative products and their ability to meet market demand; and
- the quality of our relationships with patient advocacy groups.

Any failure by us to obtain a collaboration partner for the commercialization of tenapanor in the United States for IBS-C and any failure of tenapanor to achieve market acceptance, sufficient third-party coverage or reimbursement, or commercial success for any approved indications would adversely affect our results of operations.

We currently have no sales organization. If we are unable to establish sales capabilities on our own or through third parties, we may not be able to commercialize tenapanor or any of our other product candidates.

We currently do not have a sales organization. In order to commercialize or co-promote tenapanor for the treatment of IBS-C, we currently plan to seek a collaborative relationship with one or more third parties, rather than to build internal marketing, sales, distribution, managerial and other non-technical capabilities for the commercialization of tenapanor for IBS-C. There can be no assurances that we will be successful in establishing collaborative relationships in a timely manner or on terms that are acceptable to us, and if we fail to do so, we may choose to further delay, or delay indefinitely, the commercialization of tenapanor for IBS-C.

We currently plan to commercialize tenapanor for the control of serum phosphorus in CKD patients on dialysis, if approved, on our own. In order to do so, we will need to establish an appropriate sales organization with technical expertise, as well as supporting distribution capabilities. This will be expensive and time consuming. As a company, we have no prior experience in the marketing, sale and distribution of pharmaceutical products and there are significant risks involved in building and managing a sales organization, including our ability to secure the capital necessary to fund such efforts on acceptable terms, hire, retain, and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, comply with regulatory requirements applicable to the marketing and sale of drug products and effectively manage a geographically dispersed sales and marketing team.

If we fail or are delayed in the development of our internal sales, marketing and distribution capabilities, we may choose to delay the commercialization tenapanor for the control of serum phosphorus, if approved, or such commercialization could be adversely impacted.

Third-party payor coverage and reimbursement status of newly-approved products are uncertain. Failure to obtain or maintain adequate coverage and reimbursement for our products, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The pricing, coverage and reimbursement of our product candidates, if approved, must be adequate to support a commercial infrastructure. The availability and adequacy of coverage and reimbursement by governmental and private payors are essential for most patients to be able to afford treatments such as ours, assuming approval. Sales of our product candidates will depend substantially, both domestically and abroad, on the extent to which the costs of our product candidates will be paid for by health maintenance, managed care, pharmacy benefit, and similar healthcare management organizations, or reimbursed by government authorities, private health insurers, and other third-party payors. If coverage and reimbursement are not available, or are available only to limited levels, we, or our collaboration partners, may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a return on our investment.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. In the United States, the principal decisions about coverage and reimbursement for new drugs are typically made by the Centers for Medicare & Medicaid Services ("CMS"), an agency within the U.S. Department of Health and Human Services responsible for administering the Medicare program, as CMS decides whether and to what extent a new drug will be covered and reimbursed under Medicare. Private payors tend to follow the coverage reimbursement policies established by CMS to a substantial degree. It is difficult to predict what CMS will decide with respect to reimbursement for products such as ours.

There is increased uncertainty related to insurance coverage and reimbursement for drugs, like tenapanor, which, if approved, will be marketed for the control of serum phosphorus in CKD patients on dialysis. In January 2011, CMS implemented a new prospective payment system for dialysis treatment. Under the ESRD prospective payment system, CMS generally makes a single bundled payment to the dialysis facility for each dialysis treatment that covers all items and services routinely required for dialysis treatments furnished to Medicare beneficiaries in Medicare-certified ESRD facilities or at their home, including the cost of certain routine drugs. The inclusion of oral medications without intravenous equivalents in the bundled payment was initially delayed until January 1, 2014 and through several subsequent legislative actions was delayed again January 1, 2025. As a result, absent further legislation on this matter, beginning in 2025, oral-only ESRD-related drugs may be included in the ESRD bundle and separate Medicare payment for these drugs will no longer be available, as is the case today under Medicare Part D. While it is too early to project the full impact that bundling may have on the industry, the impact could potentially cause dramatic price reductions for tenapanor, if approved. We may be unable to sell tenapanor, if approved, to dialysis providers on a profitable basis if third-party payors reduce their current levels of payment, or if our costs of production are higher than levels necessary for an appropriate gross margin after payment of all discounts, rebates and chargebacks.

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

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

We may not be successful in our efforts to develop our product candidates that are at an early stage of development, or expand our pipeline of product candidates, as a result of numerous factors, which may include the inability to access capital necessary to fund such efforts on acceptable terms.

A key element of our strategy has been focused on the expansion of our pipeline of product candidates utilizing our proprietary drug discovery and design platform and to advance such product candidates through clinical development. Our inability to access capital in a timely manner or on acceptable terms to fund our early stage product candidates may force us to consider certain restructuring activities to enable the funding of those early assets through the use of alternative structures. In addition, of the large number of drugs in development, only a small percentage of such drugs successfully complete the FDA regulatory approval process and are commercialized. Accordingly, even if we are able to continue to fund our research and early stage development programs, there can be no assurance that any product candidates will reach the clinic or be successfully developed or commercialized.

Research programs to identify product candidates require substantial technical, financial and human resources, whether or not any product candidates are ultimately identified. Although our research and development efforts to date have resulted in several development programs, we may not be able to develop product candidates that are safe, effective and well-tolerated. Our research programs may initially show promise in identifying potential product candidates, and we may select candidates for development, yet we may fail to advance product candidates to clinical development for many reasons, including the following:

- we may be unable to access sufficient capital on acceptable terms to fund the development of all of our assets and as a result we may be forced to delay or terminate the development of certain product candidates, or to consider restructuring efforts to secure alternate funding for those assets;
- the research methodology used and our drug discovery and design platform may not be successful in identifying potential product candidates;
- competitors may develop alternatives that render our product candidates obsolete or less attractive;
- product candidates we develop may nevertheless be covered by third parties' patents or other exclusive rights;
- the market for a product candidate may change during our program so that the continued development of that product candidate is no longer reasonable;
- a product candidate may on further study be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective, well-tolerated or otherwise does not meet applicable regulatory or commercial criteria;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe, effective and well-tolerated by patients, the medical community or third-party payors, if applicable.

Even if we are successful in continuing to expand our pipeline, through our own research and development efforts, the potential product candidates that we identify or for which we acquire rights may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize a product pipeline, we may not be able to generate revenue from product sales in future periods or ever achieve profitability.

Clinical drug development involves a lengthy and expensive process with an uncertain outcome and the results of earlier studies and trials may not be predictive of future trial results.

Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must conduct extensive clinical studies to demonstrate the safety and efficacy of the product candidates in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical and clinical studies of our product candidates may not be predictive of the results of later-stage clinical trials. An unexpected adverse event profile, or the results of drug-drug interaction studies, may present challenges for the future development and commercialization of a product candidate for a particular condition despite receipt of positive efficacy data in a clinical study. A number of companies in the pharmaceutical, biopharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials for similar indications that we are pursuing due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier studies, and we cannot be certain that we will not face similar setbacks.

Furthermore, we could encounter delays if our ongoing clinical trials are suspended or terminated by us, by the IRBs of the institutions in which the trial is being conducted, or by the FDA or other regulatory authorities. Such authorities may suspend or terminate a clinical trial due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Any delays in completing a clinical trial will increase costs, slow down our development and regulatory approval process for our potential products and jeopardize the ability to commence product sales and generate revenue from a potential product. Any of these occurrences may significantly harm our business, financial condition and prospects.

Furthermore, even though we have completed our Phase 3 clinical development program for tenapanor for the control of serum phosphorus, the results may not be sufficient to obtain the desired regulatory approval for tenapanor, or if such regulatory approval is obtained, the content of the label approved by regulatory authorities may materially and adversely impact our ability to commercialize the product for the approved indication.

We rely on third parties to conduct some of our nonclinical studies and all of our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be unable to obtain regulatory approval for additional products or commercialize our product candidates.

We do not have the ability to independently conduct clinical trials and, in some cases, nonclinical studies. We rely on medical institutions, clinical investigators, contract laboratories, and other third parties, such as CROs, to conduct clinical trials on our product candidates. The third parties with whom we contract for execution of the clinical trials play a significant role in the conduct of these trials and the subsequent collection and analysis of data. However, these third parties are not our employees, and except for contractual duties and obligations, we control only certain aspects of their activities and have limited ability to control the amount or timing of resources that they devote to our programs. Although we rely, and will continue to rely, on these third parties to conduct some of our nonclinical studies and all of our clinical trials, we remain responsible for ensuring that each of our studies and clinical trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards and our reliance on third parties does not relieve us of our regulatory responsibilities. We, and these third parties are required to comply with current GLPs for nonclinical studies, and good clinical practices ("GCPs") for clinical studies. GLPs and GCPs are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area ("EEA") and comparable foreign regulatory authorities for all of our products in nonclinical and clinical development, respectively. Regulatory authorities enforce GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our third-party contractors fail to comply with applicable regulatory requirements, including GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, the European Medicines Agency ("EMA"), or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. There can be no assurance that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

Our products or product candidates may cause undesirable side effects or have other properties that could delay our clinical trials, or delay or prevent regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following any regulatory approval that is achieved. If we or others identify undesirable side effects caused by any product candidate following receipt of marketing approval, the ability to market such product candidate could be compromised.

Undesirable side effects caused by our products or product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials, result in the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities or limit the commercial profile of an approved label. To date, patients treated with tenapanor have experienced drug-related side effects including diarrhea, nausea, vomiting, flatulence, abdominal discomfort, abdominal pain, abdominal distention and changes in electrolytes. Despite our receipt of marketing approval for tenapanor for IBS-C in adults and the completion of our Phase 3 clinical program for tenapanor for the control of serum phosphorus, in the event that future trials conducted by us with tenapanor, or trials we conduct with our other product candidates, reveal an unacceptable severity and prevalence of these or other side effects, such trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of tenapanor for such indication, or any such other product candidate, for any or all targeted indications. Additionally, despite a positive efficacy profile, the prevalence and/or severity of these or other side effects could cause us to cease further development of a product candidate for a particular indication, or entirely. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

In addition, if we or others identify undesirable side effects caused by one of our products for which we have received regulatory approval, a number of potentially significant negative consequences could occur, including:

- regulatory authorities may withdraw their approval of the product or seize the product;
- we, or a collaboration partner, may be required to recall the product;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof, including the imposition of a Risk Evaluation and Mitigation Strategy (“REMS”) which could require creation of a Medication Guide or patient package insert outlining the risks of such side effects for distribution to patients, a communication plan to educate healthcare providers of the drugs’ risks, as well as other elements to assure safe use of the product, such as a patient registry and training and certification of prescribers;
- we, or a collaboration partner, may be subject to fines, injunctions or the imposition of civil or criminal penalties;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us, or a collaboration partner, from achieving or maintaining market acceptance of a particular product candidate, if approved, and could result in the loss of significant revenue to us, which would materially and adversely affect our results of operations and business.

We face substantial competition and our competitors may discover, develop or commercialize products faster or more successfully than us.

The biotechnology and pharmaceutical industries are highly competitive, and we face significant competition from companies in the biotechnology, pharmaceutical and other related markets that are researching and marketing products designed to address diseases that we are currently developing products to treat. If approved for marketing by the FDA or other regulatory agencies, tenapanor, as well as our other product candidates, would compete against existing treatments.

For example, tenapanor will, if approved for the control of serum phosphorus in CKD patients on dialysis, compete directly with phosphate binders for the control of serum phosphorus in CKD patients on dialysis. The various types of phosphate binders commercialized in the United States include the following:

- Calcium carbonate (many over-the-counter brands including Tums and Caltrate);

- Calcium acetate (several prescription brands including PhosLo and Phoslyra);
- Lanthanum carbonate (Fosrenol);
- Sevelamer hydrochloride (Renagel);
- Sevelamer carbonate (Renvela);
- Sucroferric oxyhydroxide (Velphoro); and
- Ferric citrate (Auryxia).

The hydrochloride form of sevelamer, Renagel, was launched in the United States by Genzyme Corporation in 1998 prior to its acquisition by Sanofi, and the carbonate form, Renvela, was launched in 2008. Generic sevelamer carbonate has been approved in certain jurisdictions in Europe since 2015 and in the U.S. market since June 2017. In addition to the currently marketed phosphate binders, we are aware of at least two other binders in development, including fermagate (Alpharen), an iron-based binder in Phase 3 being developed by Opko Health, Inc., and PT20, an iron-based binder in Phase 3 being developed by Shield Therapeutics.

In respect of tenapanor for the treatment of IBS-C, numerous treatments exist for constipation and the constipation component of IBS-C, many of which are over-the-counter. These include psyllium husk (such as Metamucil), methylcellulose (such as Citrucel), calcium polycarbophil (such as FiberCon), lactulose (such as Cephulac), polyethylene glycol (such as MiraLax), sennosides (such as Exlax), bisacodyl (such as Ducolax), docusate sodium (such as Colace), magnesium hydroxide (such as Milk of Magnesia), saline enemas (such as Fleet) and sorbitol. These agents are generally inexpensive and work well to temporarily relieve constipation.

We are aware of four prescription products marketed for certain patients with IBS-C, including Linzess (linaclotide), Amitiza (lubiprostone), Trulance (plecanatide) and Zelnorm (tegaserod maleate).

It is possible that our competitors will develop and market drugs or other treatments that are less expensive and more effective than our product candidates, or that will render our product candidates obsolete. It is also possible that our competitors will commercialize competing drugs or treatments before we, or our collaboration partners, can launch any products developed from our product candidates. We also anticipate that we will face increased competition in the future as new companies enter into our target markets.

Many of our competitors have materially greater name recognition and financial, manufacturing, marketing, research and drug development resources than we do. Additional mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Large pharmaceutical companies in particular have extensive expertise in preclinical and clinical testing and in obtaining regulatory approvals for drugs. In addition, academic institutions, government agencies, and other public and private organizations conducting research may seek patent protection with respect to potentially competitive products or technologies. These organizations may also establish exclusive collaboration partnerships or licensing relationships with our competitors.

We may experience difficulties in managing our current activities and growth given our level of managerial, operational, financial and other resources.

While we have continued to work to optimize our management composition, personnel and systems to support our current activities for future growth, these resources may not be adequate for this purpose. Our need to effectively execute our business strategy requires that we:

- manage our pre-commercialization activities effectively;
- manage our clinical trials effectively;

- manage our internal research and development efforts effectively while carrying out our contractual obligations to licensors, contractors, collaborators, government agencies and other third parties;

- continue to improve our operational, financial and management controls, reporting systems and procedures; and

- retain and motivate our remaining employees and potentially identify, recruit, and integrate additional employees.

If we are unable to maintain or expand our managerial, operational, financial and other resources to the extent required to manage our development and pre-commercialization activities, our business will be materially adversely affected.

We rely completely on third parties to manufacture our nonclinical and clinical drug supplies, and we intend to rely on third parties to produce commercial supplies of tenapanor, if tenapanor is ultimately commercialized for any indication. Our business would be harmed if those third parties fail to obtain approval of the FDA or comparable regulatory authorities, fail to provide us with sufficient quantities of drug, or fail to do so at acceptable quality levels or prices.

We do not currently have, nor do we plan to acquire, the infrastructure or capability internally to manufacture tenapanor or any of other our product candidates on a commercial scale, or to manufacture our drug supplies for use in the conduct of our nonclinical and clinical studies. The facilities used by our contract manufacturers to manufacture our drug supply must be approved by the FDA pursuant to inspections that will be conducted after an NDA is submitted to the FDA. Our ability to control the manufacturing process of our product candidates is limited to the contractual requirements and obligations we impose on our contract manufacturer. Although they are contractually required to so do, we are completely dependent on our contract manufacturing partners for compliance with the regulatory requirements, known as cGMPs, for manufacture of both active drug substances and finished drug products.

If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would require a transfer of technology to such alternative facilities and potentially additional capital investment. In addition, the use of alternative manufacturing facilities would require qualification with the FDA or comparable foreign regulatory authorities, all of which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved.

We rely on our manufacturers to purchase from third-party suppliers the materials necessary to produce our product candidates for our clinical studies. There are a limited number of suppliers for raw materials and certain processes, such as spray drying, that we use to manufacture our drugs, and there may be a need to identify alternate suppliers to prevent a possible disruption of the manufacture of the materials necessary to produce our product candidates for our clinical studies, and, if approved, ultimately for commercial sale. We do not have any control over the process or timing of the acquisition of these raw materials or processes by our manufacturers. Although we generally do not begin a clinical study unless we believe we have on hand, or will be able to manufacture, a sufficient supply of a product candidate to complete such study, any significant delay or discontinuity in the supply of a product candidate, or the raw material components thereof, for an ongoing clinical study due to the need to replace a third-party manufacturer could considerably delay completion of our clinical studies, product testing, and potential regulatory approval of our product candidates, which could harm our business and results of operations.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability, and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- regulatory investigations, product recalls or withdrawals, or labeling, marketing or promotional restrictions;
- loss of revenue; and
- the inability to commercialize or co-promote our product candidates.

Our inability to obtain and maintain sufficient product liability insurance at an acceptable cost and scope of coverage to protect against potential product liability claims could prevent or inhibit the commercialization of any products we develop. We currently carry product liability insurance covering use in our clinical trials in the amount of $10.0 million in the aggregate. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies also have various exclusions and deductibles, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Moreover, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses.

If we fail to attract, retain and motivate our executives, senior management and key personnel, our business will suffer.

Recruiting and retaining qualified scientific, clinical, medical, manufacturing, and sales and marketing personnel is critical to our success. We are highly dependent on our executives, senior management and certain other key employees. The loss of the services of our executives, senior management or other key employee could impede the achievement of our research, development and commercial objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executives, senior management and other key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain marketing approval of and commercialize products. We may be unable to hire, train or motivate these key personnel on acceptable terms given the intense competition among numerous biopharmaceutical companies for similar personnel, particularly in our geographic regions. If we are unable to continue to attract and retain high quality personnel, our ability to grow and pursue our business strategy will be limited.

Our proprietary drug discovery and design platform, and, in particular, APECCS, is a new approach to the discovery, design and development of new product candidates and may not result in any products of commercial value. Furthermore, the APECCS aspects of our drug discovery and design platform may have diminished relevance to our efforts focused on the discovery of targets and therapies for the treatment of renal diseases.

We have developed a proprietary drug discovery and design platform to enable the identification, screening, testing, design and development of new product candidates, and have developed APECCS as a component of this of this platform. We have utilized APECCS in the design of our small molecules and to identify new and potentially novel targets in the GI tract. However, there can be no assurance that APECCS will be able to identify new targets in the GI tract or that any of these potential targets or other aspects of our proprietary drug discovery and design platform will yield product candidates that could enter clinical development and, ultimately, be commercially valuable. In addition, as we focus our efforts on the discovery and design of therapies for the treatment of cardiorenal diseases, we may need to further develop our proprietary drug discovery and design platform to enhance its usefulness in the identification, screening, testing, design and development of new product candidates for the treatment of cardiorenal diseases. There can be no assurances that we will be successful in such additional development of our platform or that our platform will yield product candidates for the treatment of renal diseases.

We and our collaborators, CROs and other contractors and consultants depend on information technology systems, and any failure of these systems could harm our business. Security breaches, loss of data, and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business, results of operations and financial condition.

We and our collaborators, CROs, and other contractors and consultants collect and maintain information in digital form that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business. In the ordinary course of our business, we and our collaborators, CROs and other contractors and consultants collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personal information. It is critical that we and our collaborators, CROs and other contractors and consultants do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We have established physical, electronic and organizational measures to safeguard and secure our systems to prevent a data compromise, and rely on commercially available systems, software, tools, and monitoring to provide security for our information technology systems and the processing, transmission and storage of digital information. We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may or could have access to our confidential information. Our internal information technology systems and infrastructure, and those of our current and any future collaborators, CROs, contractors and consultants and other third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization.

The risk of a security breach or disruption or data loss, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information or other intellectual property. The costs to us to mitigate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and while we have implemented security measures to protect our data security and information technology systems, our efforts to address these problems may not be successful, and these problems could result in unexpected interruptions, delays, cessation of service and other harm to our business and our competitive position. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Moreover, if a computer security breach affects our systems or those of our collaborators, CROs or other contractors, or results in the unauthorized release of personally identifiable information, our reputation could be materially damaged. We would also be exposed to a risk of loss or litigation and potential liability, which could materially adversely affect our business, results of operations and financial condition.

In addition, such a breach may require notification to governmental agencies, the media or individuals pursuant to various federal and state privacy and security laws, if applicable, including the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as amended by the Health Information Technology for Clinical Health Act of 2009 ("HITECH") and its implementing rules and regulations. Even when HIPAA does not apply, according to the Federal Trade Commission (the "FTC") failing to take appropriate steps to keep consumers' personnel information secure constitutes unfair acts or practices in or affecting commerce in violation of Section 5(a) of the Federal Trade Commission Act (the "FTCA") 15 U.S.C § 45(a). The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Individually identifiable health information is considered sensitive data that merits stronger safeguards. The FTC's guidance for appropriately securing consumers' personal information is similar to what is required by the HIPAA Security Rule. We may also be subject to state laws requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. For example, California recently enacted legislation, the California Consumer Privacy Act ("CCPA") which went into effect January 1, 2020. The CCPA, among other things, creates new data privacy obligations for covered companies and provides new privacy rights to California residents, including the right to opt out of certain disclosures of their information. The CCPA also creates a private right of action with statutory damages for certain data breaches, thereby potentially increasing risks associated with a data breach. Although the law includes limited exceptions, including for "protected health information" maintained by a covered entity or business associate, it may regulate or impact our processing of personal information depending on the context.

We incur significant costs as a result of operating as a public company, and our management will devote substantial time to new compliance initiatives. We may fail to comply with the rules that apply to public companies, including Section 404 of the Sarbanes-Oxley Act of 2002, which could result in sanctions or other penalties that would harm our business.

We incur significant legal, accounting and other expenses as a public company, including costs resulting from public company reporting obligations under the Securities Exchange Act of 1934, as amended (the "Exchange Act") and regulations regarding corporate governance practices. The listing requirements of The Nasdaq Global Market require that we satisfy certain corporate governance requirements relating to director independence, distributing annual and interim reports, stockholder meetings, approvals and voting, soliciting proxies, conflicts of interest and a code of conduct. Our management and other personnel will need to devote a substantial amount of time to ensure that we comply with all of these requirements. Moreover, the reporting requirements, rules and regulations will increase our legal and financial compliance costs and will make some activities more time consuming and costly. Any changes we make to comply with these obligations may not be sufficient to allow us to satisfy our obligations as a public company on a timely basis, or at all. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with being a public company, could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or board committees or to serve as executive officers, or to obtain certain types of insurance, including directors' and officers' insurance, on acceptable terms.

We are subject to Section 404 of The Sarbanes-Oxley Act of 2002 ("Section 404") and the related rules of the Securities and Exchange Commission ("SEC") which require, among other things, our management to report on the effectiveness of our internal control over financial reporting. Further, Section 404 generally requires that our independent registered public accounting firm provide an attestation report on the effectiveness of our internal control over financial reporting. Our compliance with Section 404 requires that we incur substantial expense and expend significant management efforts.

During the course of our review and testing of our internal controls, we may identify deficiencies and be unable to remediate them before we must provide the required reports. Furthermore, if we have a material weakness in our internal controls over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall. In addition, as a public company we are required to file accurate and timely quarterly and annual reports with the SEC under the Exchange Act.

Any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from The Nasdaq Global Market or other adverse consequences that would materially harm our business.

We identified a material weakness in our internal control over financial reporting in the past. If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, our ability to operate our business and investors' views of us and could have a material adverse effect on the price of our common stock.

In 2019, management and our independent registered public accounting firm identified a control deficiency that constituted a material weakness in our internal control over financial reporting. The material weakness was due to a failure in the design and implementation of controls over the evaluation of the terms of our clinical trial contracts for inclusion into our clinical financial model which estimates clinical trial expenses. Specifically, we had failed to properly interpret an expense in our clinical trial contracts which resulted in the over accrual of our clinical trial expenses during 2018 and the first quarter of 2019.

We developed and implemented a remediation plan for this material weakness which included modifications to the design and implementation of certain internal controls, and the material weakness was remediated as of December 31, 2019. Although we have remediated this material weakness, as attested by our independent registered public accounting firm, we can give no assurance that an additional material weakness or significant deficiency in our internal controls over financial reporting will not be identified in the future. Our failure to implement and maintain effective internal controls over financial reporting could result in errors in our financial statements that could result in a restatement of our financial statements and cause us to fail to meet our reporting obligations. If we cannot in the future favorably assess the effectiveness of our internal controls over financial reporting, investor confidence in the reliability of our financial reports may be adversely affected, which could have a material adverse effect on the trading price of our common stock.

We have formed in the past, and may form in the future, collaboration partnerships, joint ventures and/or licensing arrangements, and we may not realize the benefits of such collaborations.

We have current collaboration partnerships for the commercialization of tenapanor in certain foreign countries, and we currently expect to form additional collaboration partnerships, create joint ventures or enter into additional licensing arrangements with third parties in the United States and abroad that we believe will complement or augment our existing business. In particular, we have formed collaboration partnerships with Kyowa Kirin Co., Ltd. ("KKC") for certain research programs and for commercialization of tenapanor for hyperphosphatemia in Japan; with Shanghai Fosun Pharmaceutical Industrial Development Co. Ltd. ("Fosun Pharma") for commercialization of tenapanor for hyperphosphatemia and IBS-C in China and related territories; and in Canada with Knight Therapeutics, Inc. ("Knight") for commercialization of tenapanor for IBS-C and hyperphosphatemia. We face significant competition in seeking appropriate collaboration partners, and the process to identify an appropriate partner and negotiate appropriate terms is time-consuming and complex. Any delays in identifying suitable additional collaboration partners and entering into agreements to develop our product candidates could also delay the commercialization of our product candidates, which may reduce their competitiveness even if they reach the market. Moreover, we may not be successful in our efforts to establish a collaboration partnership for tenapanor for IBS-C commercialization in the United States or for any future product candidates and programs on terms that are acceptable to us, or at all. With respect to tenapanor for IBS-C in the United States, this may be because third parties may not view tenapanor for the treatment of IBS-C as having sufficient potential to be successfully commercialized. Additionally, despite third party interest in the commercialization of tenapanor for IBS-C in the United States, we may decide that it is not in the best interests of the Company to enter into such a collaboration partnership. If we are unable to establish a collaboration partnership for the commercialization of IBS-C in the United States under acceptable terms, the commercialization of tenapanor for IBS-C could be materially and adversely impacted, which could have a material adverse effect on our business, results of operations, financial condition and prospects. Additionally, we may not be successful in our efforts to establish collaboration partnerships for our other product candidates because our product candidates and programs may be deemed to be at too early of a stage of development for collaborative effort, our research and development pipeline may be viewed as insufficient, and/or third parties may not view such other product candidates and programs as having sufficient potential for commercialization, including the likelihood of an adequate safety and efficacy profile. There is no guarantee that our current collaboration partnerships or any such arrangements we enter into in the future will be successful, or that any collaboration partner will commit sufficient resources to the development, regulatory approval, and commercialization effort for such products, or that such alliances will result in us achieving revenues that justify such transactions.

Epidemic diseases, or the perception of their effects, could have a material adverse effect on our business, financial condition, results of operations or cash flows.

Outbreaks of epidemic, pandemic, or contagious diseases, such as the recent novel coronavirus (COVID-19) or, historically, the Ebola virus, Middle East Respiratory Syndrome, Severe Acute Respiratory Syndrome, or the H1N1 virus, could disrupt our business. Business disruptions could include disruptions or restrictions on our ability to conduct our clinical trials, as planned, travel, as well as temporary closures of the facilities of our collaboration partners, suppliers or contract manufacturers. Any disruption of our clinical trial operations, collaboration partners, suppliers or contract manufacturers could impact our operating results. For example, a supplier of intermediates for our API is located in China and one of our collaboration partners is located in Japan, both of which have recently experienced an outbreak of the novel coronavirus. Additionally, while our Phase 3 clinical development of tenapanor for the control of serum phosphorus in CKD patients on dialysis is complete, we have ongoing and planned clinical trials for tenapanor that may be delayed as a result of the restrictions placed on access to dialysis centers during the COVID-19 outbreak. While at this point, the extent to which the COVID-19 outbreak may impact our results is uncertain, it could result in delays in delivery of our intermediates from our supplier or delays in clinical development activities by us, or our collaboration partners, which may negatively impact our operating results. In addition, a significant outbreak of epidemic, pandemic, or contagious diseases in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downturn that could affect demand for our current or future products, and our ability to access additional capital on acceptable terms, if at all. Any of these events could have a material adverse effect on our business, financial condition, results of operations, or cash flows.

We may engage in strategic transactions that could impact our liquidity, increase our expenses and present significant distractions to our management.

We may consider strategic transactions, such as acquisitions of companies, asset purchases, and/or in-licensing of products, product candidates or technologies. In addition, if we are unable to access capital on a timely basis and on terms that are acceptable to us, we may be forced to restructure certain aspects of our business or identify and complete one or more strategic collaborations or other transactions in order to fund the development or commercialization of tenapanor or certain of our product candidates through the use of alternative structures. Additional potential transactions that we may consider include a variety of different business arrangements, including spin-offs, spin outs, collaboration partnerships, joint ventures, restructurings, divestitures, business combinations and investments. Any such transaction may require us to incur non-recurring or other charges, may increase our near- and long-term expenditures and may pose significant integration challenges or disrupt our management or business, which could adversely affect our operations and financial results. For example, these transactions may entail numerous operational and financial risks, including:

- up-front, milestone and royalty payments, equity investments and financial support of new research and development candidates including increase of personnel, all of which may be substantial;
- exposure to unknown liabilities;
- disruption of our business and diversion of our management’s time and attention in order to develop acquired products, product candidates or technologies;
- incurrence of substantial debt or dilutive issuances of equity securities;
- higher-than-expected acquisition and integration costs;
- write-downs of assets or goodwill or impairment charges;
- increased amortization expenses;

- difficulty and cost in combining the operations and personnel of any acquired businesses with our operations and personnel;

- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and

- inability to retain key employees of any acquired businesses.

Accordingly, although there can be no assurance that we will undertake or successfully complete any transactions of the nature described above, any transactions that we do complete may be subject to the foregoing or other risks and could have a material adverse effect on our business, results of operations, financial condition and prospects.

If we seek and obtain approval to commercialize our product candidates outside of the United States, manufacture our product candidates outside of the United States, or otherwise engage in business outside of the United States, a variety of risks associated with international operations could materially adversely affect our business.

We or our collaboration partners may decide to seek marketing approval for certain of our product candidates outside the United States or otherwise engage in business outside the United States, including entering into contractual agreements with third-parties. We currently utilize contract manufacturing organizations located outside of the United States to manufacture our active drug substance for tenapanor. We are subject to additional risks related to entering these international business markets and relationships, including:

- different regulatory requirements for drug approvals in foreign countries;

- differing United States and foreign drug import and export rules;

- reduced protection for intellectual property rights in foreign countries;

- unexpected changes in tariffs, trade barriers and regulatory requirements;

- different reimbursement systems, and different competitive drugs;

- economic weakness, including inflation, or political instability in particular foreign economies and markets;

- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;

- foreign taxes, including withholding of payroll taxes;

- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations incident to doing business in another country;

- workforce uncertainty in countries where labor unrest is more common than in the United States;

- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;

- potential liability resulting from development work conducted by these distributors; and

- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters.

Our business involves the use of hazardous materials and we and third-parties with whom we contract must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Our research and development activities involve the controlled storage, use and disposal of hazardous materials, including the components of our product candidates and other hazardous compounds. We and manufacturers and suppliers with whom we may contract are subject to laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. In some cases, these hazardous materials and various wastes resulting from their use are stored at our and our manufacturers' facilities pending their use and disposal. We cannot eliminate the risk of contamination, which could cause an interruption of our commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. We cannot guarantee that the safety procedures utilized by third-party manufacturers and suppliers with whom we may contract will comply with the standards prescribed by laws and regulations or will eliminate the risk of accidental contamination or injury from these materials. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. We do not currently carry biological or hazardous waste insurance coverage.

We may be adversely affected by the global economic environment.

Our ability to attract and retain collaboration partners or customers, invest in and grow our business and meet our financial obligations depends on our operating and financial performance, which, in turn, is subject to numerous factors, including the prevailing economic conditions and financial, business and other factors beyond our control, such as the rate of unemployment, the number of uninsured persons in the United States, presidential elections, other political influences and inflationary pressures. Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. The 2008 global financial crisis caused extreme volatility and disruptions in the capital and credit markets. We cannot anticipate all the ways in which the global economic climate and global financial market conditions could adversely impact our business in the future.

We are exposed to risks associated with reduced profitability and the potential financial instability of our collaboration partners or customers, many of which may be adversely affected by volatile conditions in the financial markets. For example, unemployment and underemployment, and the resultant loss of insurance, may decrease the demand for healthcare services and pharmaceuticals. If fewer patients are seeking medical care because they do not have insurance coverage, our collaboration partners or customers may experience reductions in revenues, profitability and/or cash flow that could lead them to reduce their support of our programs or financing activities. If collaboration partners or customers are not successful in generating sufficient revenue or are precluded from securing financing, they may not be able to pay, or may delay payment of, accounts receivable that are owed to us. In addition, volatility in the financial markets could cause significant fluctuations in the interest rate and currency markets. We currently do not hedge for these risks. The foregoing events, in turn, could adversely affect our financial condition and liquidity. In addition, if economic challenges in the United States result in widespread and prolonged unemployment, either regionally or on a national basis, or if certain provisions of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively known as the Affordable Care Act, are repealed, a substantial number of people may become uninsured or underinsured. To the extent economic challenges result in fewer individuals pursuing or being able to afford our product candidates once commercialized, our business, results of operations, financial condition and cash flows could be adversely affected.

We may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our corporate headquarters and other facilities are located in the San Francisco Bay Area, which in the past has experienced severe earthquakes. We do not carry earthquake insurance. Earthquakes or other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects.

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

Risks Related to Government Regulation

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing and distribution of drug products are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, which regulations differ from country to country. Neither we nor any of our collaboration partners is permitted to market any drug product in the United States until we receive marketing approval from the FDA. Obtaining regulatory approval of a NDA can be a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and other applicable United States and foreign regulatory requirements may subject us to administrative or judicially imposed sanctions or other actions, including:

- warning or untitled letters;
- civil and criminal penalties;
- injunctions;
- withdrawal of regulatory approval of products;
- product seizure or detention;
- product recalls;
- total or partial suspension of production; and
- refusal to approve pending NDAs or supplements to approved NDAs.

Prior to obtaining approval to commercialize a drug candidate in the United States or abroad, we or our collaboration partners must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or other foreign regulatory agencies, that such drug candidates are safe and effective for their intended uses. The number of nonclinical studies and clinical trials that will be required for FDA approval varies depending on the drug candidate, the disease or condition that the drug candidate is designed to address, and the regulations applicable to any particular drug candidate. Results from nonclinical studies and clinical trials can be interpreted in different ways. Even if we believe the nonclinical or clinical data for our drug candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. Administering drug candidates to humans may produce undesirable side effects, which could interrupt, delay or halt clinical trials and result in the FDA or other regulatory authorities denying approval of a drug candidate for any or all targeted indications.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable, typically takes many years following the commencement of clinical studies and depends upon numerous factors. The FDA and comparable foreign authorities have substantial discretion in the approval process and we may encounter matters with the

FDA or such comparable authorities that requires us to expend additional time and resources and delay or prevent the approval of our product candidates. For example, the FDA may require us to conduct additional studies for a drug product either prior to or post-approval, such as additional drug-drug interaction studies or safety or efficacy studies, or it may object to elements of our clinical development program such as the number of subjects in our current clinical trials from the United States. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may cause delays in the approval or result in a decision not to approve an application for regulatory approval. Despite the time and expense exerted, failure can occur at any stage.

Applications for our product candidates could fail to receive regulatory approval for many reasons, including but not limited to the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our, or our collaboration partners', clinical studies;

- the population studied in the clinical program may not be sufficiently broad or representative to assure safety in the full population for which approval is sought;

- the FDA or comparable foreign regulatory authorities may disagree with the interpretation of data from preclinical studies or clinical studies;

- the data collected from clinical studies of our product candidates may not be sufficient to support the submission of a NDA or other submission or to obtain regulatory approval in the United States or elsewhere;

- we or our collaboration partners may be unable to demonstrate to the FDA or comparable foreign regulatory authorities that a product candidate's risk-benefit ratio for its proposed indication is acceptable;

- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications, or facilities of third-party manufacturers responsible for clinical and commercial supplies; and

- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process, as well as the unpredictability of the results of clinical studies, may result in our failure and/or that of our collaboration partners to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations, and prospects. Additionally, if the FDA requires that we conduct additional clinical studies, places limitations in our label, delays approval to market our product candidates or limits the use of our products, our business and results of operations may be harmed.

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

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

Even if a drug is approved by the FDA or foreign regulatory authorities, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCP regulations for any clinical trials that we conduct post-approval. As such, we and our third-party contract manufacturers will be subject to continual review and periodic inspections to assess compliance with regulatory requirements. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, and quality control. Regulatory authorities may also impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly post-marketing studies. Furthermore, any new legislation addressing drug safety issues could result in delays or increased costs to assure compliance.

We will also be required to report certain adverse reactions and production problems, if any, to the FDA, and to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we may not promote our products for indications or uses for which they do not have FDA approval.

Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- warning or untitled letters, fines or holds on clinical trials;
- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market or voluntary or mandatory product recalls;
- injunctions or the imposition of civil or criminal penalties;
- suspension or revocation of existing regulatory approvals;
- suspension of any of our ongoing clinical trials;
- refusal to approve pending applications or supplements to approved applications submitted by us;
- restrictions on our or our contract manufacturers' operations; or
- product seizure or detention, or refusal to permit the import or export of products.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize our product candidates. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

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

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these Executive Orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

We and our contract manufacturers are subject to significant regulation with respect to manufacturing our product candidates. The manufacturing facilities on which we rely may not continue to meet regulatory requirements or may not be able to meet supply demands.

All entities involved in the preparation of product candidates for clinical studies or commercial sale, including our existing contract manufacturers for our product candidates are subject to extensive regulation. Components of a finished therapeutic product approved for commercial sale or used in late-stage clinical studies must be manufactured in accordance with cGMP regulations. These regulations govern manufacturing processes and procedures (including record keeping) and the implementation and operation of quality systems to control and assure the quality of investigational products and products approved for sale. Poor control of production processes can lead to the introduction of contaminants or to inadvertent changes in the properties or stability of our product candidates that may not be detectable in final product testing. We or our contract manufacturers must supply all necessary documentation in support of an NDA or comparable regulatory filing on a timely basis and must adhere to cGMP regulations enforced by the FDA and other regulatory agencies through their facilities inspection programs. The facilities and quality systems of some or all of our third-party contractors must pass a pre-approval inspection for compliance with the applicable regulations as a condition of regulatory approval of our product candidates. In addition, the regulatory authorities may, at any time, audit or inspect a manufacturing facility involved with the preparation of our product candidates or our other potential products or the associated quality systems for compliance with the regulations applicable to the activities being conducted. Although we oversee the contract manufacturers, we cannot control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements. If these facilities do not pass a pre-approval plant inspection, regulatory approval of the products may not be granted or may be substantially delayed until any violations are corrected to the satisfaction of the regulatory authority, if ever. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel.

The regulatory authorities also may, at any time following approval of a product for sale, audit the manufacturing facilities of our third-party contractors. If any such inspection or audit identifies a failure to comply with applicable regulations or if a violation of our product specifications or applicable regulations occurs independent of such an inspection or audit, we or the relevant regulatory authority may require remedial measures that may be costly and/or time consuming for us or a third party to implement, and that may include the temporary or permanent suspension of a clinical study or commercial sales or the temporary or permanent suspension of production or closure of a facility. Any such remedial measures imposed upon us or third parties with whom we contract could materially harm our business.

If we or any of our third-party manufacturers fail to maintain regulatory compliance, the FDA or other applicable regulatory authority can impose regulatory sanctions including, among other things, refusal to approve a pending application for a new drug product, withdrawal of an approval, or suspension of production. As a result, our business, financial condition, and results of operations may be materially harmed.

Additionally, if supply from one approved manufacturer is interrupted, an alternative manufacturer would need to be qualified through an NDA, a supplemental NDA or equivalent foreign regulatory filing, which could result in further delay. The regulatory agencies may also require additional studies if a new manufacturer is relied upon for commercial production.

Switching manufacturers may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines.

These factors could cause us to incur higher costs and could cause the delay or termination of clinical studies, regulatory submissions, required approvals, or commercialization of our product candidates. Furthermore, if our suppliers fail to meet contractual requirements and we are unable to secure one or more replacement suppliers capable of production at a substantially equivalent cost, our clinical studies may be delayed or we could lose potential revenue.

If we fail to comply or are found to have failed to comply with FDA and other regulations related to the promotion of our products for unapproved uses, we could be subject to criminal penalties, substantial fines or other sanctions and damage awards.

The regulations relating to the promotion of products for unapproved uses are complex and subject to substantial interpretation by the FDA and other government agencies. If tenapanor or our other product candidates receive marketing approval, we and our collaboration partners, if any, will be restricted from marketing the product outside of its approved labeling, also referred to as off-label promotion. However, physicians may nevertheless prescribe an approved product to their patients in a manner that is inconsistent with the approved label, which is an off-label use. We intend to implement compliance and training programs designed to ensure that our sales and marketing practices comply with applicable regulations regarding off-label promotion. Notwithstanding these programs, the FDA or other government agencies may allege or find that our practices constitute prohibited promotion of our product candidates for unapproved uses. We also cannot be sure that our employees will comply with company policies and applicable regulations regarding the promotion of products for unapproved uses.

Over the past several years, a significant number of pharmaceutical and biotechnology companies have been the target of inquiries and investigations by various federal and state regulatory, investigative, prosecutorial and administrative entities in connection with the promotion of products for unapproved uses and other sales practices, including the Department of Justice and various U.S. Attorneys' Offices, the Office of Inspector General of the Department of Health and Human Services, the FDA, the Federal Trade Commission and various state Attorneys General offices. These investigations have alleged violations of various federal and state laws and regulations, including claims asserting antitrust violations, violations of the FFDCA, the False Claims Act, the Prescription Drug Marketing Act, anti-kickback laws, and other alleged violations in connection with the promotion of products for unapproved uses, pricing and Medicare and/or Medicaid reimbursement. Many of these investigations originate as "qui tam" actions under the False Claims Act. Under the False Claims Act, any individual can bring a claim on behalf of the government alleging that a person or entity has presented a false claim, or caused a false claim to be submitted, to the government for payment. The person bringing a qui tam suit is entitled to a share of any recovery or settlement. Qui tam suits, also commonly referred to as "whistleblower suits," are often brought by current or former employees. In a qui tam suit, the government must decide whether to intervene and prosecute the case. If it declines, the individual may pursue the case alone.

If the FDA or any other governmental agency initiates an enforcement action against us or if we are the subject of a qui tam suit and it is determined that we violated prohibitions relating to the promotion of products for unapproved uses, we could be subject to substantial civil or criminal fines or damage awards and other sanctions such as consent decrees and corporate integrity agreements pursuant to which our activities would be subject to ongoing scrutiny and monitoring to ensure compliance with applicable laws and regulations. Any such fines, awards or other sanctions would have an adverse effect on our revenue, business, financial prospects and reputation.

Tenapanor, which has been approved by the FDA for the treatment of IBS-C in Adults, and/or our other product candidates, if approved, may cause or contribute to adverse medical events that we are required to report to regulatory agencies and if we fail to do so we could be subject to sanctions that would materially harm our business.

Some participants in clinical studies of tenapanor have reported adverse effects after being treated with tenapanor, including diarrhea, nausea, flatulence, abdominal discomfort, abdominal pain, abdominal distention and changes in electrolytes. If we are successful in commercializing any products, FDA and foreign regulatory agency regulations require that we report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We may fail to report adverse events we become aware of within the prescribed timeframe. We may also fail to appreciate that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of our products. If we fail to comply with our reporting obligations, the FDA or a foreign regulatory agency could take action, including criminal prosecution, the imposition of civil monetary penalties, seizure of our products or delay in approval or clearance of future products.

Our employees, independent contractors, principal investigators, CROs, collaboration partners, consultants and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

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

Failure to obtain regulatory approvals in foreign jurisdictions would prevent us from marketing our products internationally.

In order to market any product in the EEA (which is composed of the 27 Member States of the European Union plus Norway, Iceland and Liechtenstein), and many other foreign jurisdictions, separate regulatory approvals are required. In the EEA, medicinal products can only be commercialized after obtaining a Marketing Authorization (“MA”). Before the MA is granted, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

The approval procedures vary among countries and can involve additional clinical testing, and the time required to obtain approval may differ from that required to obtain FDA approval. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one or more foreign regulatory authorities does not ensure approval by regulatory authorities in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not be able to file for regulatory approvals or to do so on a timely basis, and even if we do file we may not receive necessary approvals to commercialize our products in any market.

We and our collaboration partners may be subject to healthcare laws, regulation and enforcement; our failure or the failure of any such collaboration partners to comply with these laws could have a material adverse effect on our results of operations and financial conditions.

Although we do not currently have any products on the market, once we begin commercializing our products, we and our collaboration partners may be subject to additional healthcare statutory and regulatory requirements and enforcement by the federal government and the states and foreign governments in which we conduct our business. The laws that may affect our ability to operate as a commercial organization include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. A person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation;

- federal false claims laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the false claims statutes;

- federal criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

- the federal physician sunshine requirements under the Affordable Care Act, which requires manufacturers of drugs, devices, biologics, and medical supplies to report annually to CMS information related to payments and other transfers of value to physicians, certain other healthcare providers beginning in 2022, and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members;

- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers;

- state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources;

- state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or pricing information and marketing expenditures; and

- European and other foreign law equivalents of each of the laws, including reporting requirements detailing interactions with and payments to healthcare providers.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs and imprisonment, any of which could adversely affect our ability to market our products and adversely impact our financial results.

Legislative or regulatory healthcare reforms in the United States may make it more difficult and costly for us to obtain regulatory clearance or approval of our product candidates and to produce, market and distribute our products after clearance or approval is obtained.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the regulatory clearance or approval, manufacture, and marketing of regulated products or the reimbursement thereof. In addition, FDA regulations and guidance are often revised or reinterpreted by the FDA in ways that may significantly affect our business and our products. Any new regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of our product candidates. We cannot determine what effect changes in regulations, statutes, legal interpretation or policies, when and if promulgated, enacted or adopted may have on our business in the future. Such changes could, among other things, require:

- additional clinical trials to be conducted prior to obtaining approval;
- changes to manufacturing methods;
- recall, replacement, or discontinuance of one or more of our products; and
- additional record keeping.

Each of these would likely entail substantial time and cost and could materially harm our business and our financial results. In addition, delays in receipt of or failure to receive regulatory clearances or approvals for any future products would harm our business, financial condition and results of operations.

In addition, the full impact of recent healthcare reform and other changes in the healthcare industry and in healthcare spending is currently unknown, and may adversely affect our business model. In the United States, the Affordable Care Act was enacted in 2010 with a goal of reducing the cost of healthcare and substantially changing the way healthcare is financed by both government and private insurers. The Affordable Care Act, among other things, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period as a condition for the manufacturer’s outpatient drugs to be covered under Medicare Part D. The Bipartisan Budget Act of 2018 increased this discount to 70% beginning in January 2019.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, as well as efforts by the current Presidential Administration to modify, or repeal all, or certain provisions of, the Affordable Care Act. By way of example, the Tax Cuts and Jobs Act of 2017 includes a provision repealing, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate.” On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court's decision that the individual mandate was unconstitutional but remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. It is unclear how these decisions, subsequent appeals, and other efforts to challenge, repeal, or replace the ACA will impact the ACA or our business. We cannot predict the reform initiatives that may be adopted in the future or whether initiatives that have been adopted will be repealed or modified. We cannot predict the reform initiatives that may be adopted in the future or whether initiatives that have been adopted will be repealed or modified. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare may adversely affect the demand for any drug products for which we may obtain regulatory approval, our ability to set a price that we believe is fair for our products, our ability to obtain coverage and reimbursement approval for a product, our ability to generate revenues and achieve or maintain profitability, and the level of taxes that we are required to pay.

Other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. These new laws, among other things, included aggregate reductions of Medicare payments of 2% per fiscal year to providers that will remain in effect through 2029 unless additional action is taken by Congress, additional specific reductions in Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and an increase in the statute of limitations period for the government to recover overpayments to providers from three to five years. Additionally, individual states have become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, and to encourage importation from other countries and bulk purchasing. Recently, there has also been heightened governmental scrutiny over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products.

Risks Related to Intellectual Property

We may become subject to claims alleging infringement of third parties' patents or proprietary rights and/or claims seeking to invalidate our patents, which would be costly, time consuming and, if successfully asserted against us, delay or prevent the development and commercialization of tenapanor or our other product candidates, or prevent or delay the continued use of our drug discovery and development platform, including APECCS.

There have been many lawsuits and other proceedings asserting infringement or misappropriation of patents and other intellectual property rights in the pharmaceutical and biotechnology industries. There can be no assurances that we will not be subject to claims alleging that the manufacture, use or sale of tenapanor or any other product candidates, or that the use of our drug discovery and development platform, including APECCS, infringes existing or future third-party patents, or that such claims, if any, will not be successful. Because patent applications can take many years to issue and may be confidential for 18 months or more after filing, and because pending patent claims can be revised before issuance, there may be applications now pending which may later result in issued patents that may be infringed by the manufacture, use or sale of tenapanor or other product candidates or by the use of APECCS. Moreover, we may face patent infringement claims from non-practicing entities that have no relevant product revenue and against whom our own patent portfolio may thus have no deterrent effect. We may be unaware of one or more issued patents that would be infringed by the manufacture, sale or use of tenapanor or our other product candidates, or by the use of APECCS.

We may be subject to third-party patent infringement claims in the future against us or our that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages, including treble damages and attorney's fees if we are found to be willfully infringing a third party's patents. We may be required to indemnify future collaboration partners against such claims. We are not aware of any threatened or pending claims related to these matters, but in the future litigation may be necessary to defend against such claims. If a patent infringement suit were brought against us we could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit. In addition, if a patent infringement suit were brought against us regarding the use of aspects of our drug discovery and development platform, we could be forced to stop our use of APECCS or of other aspects of our platform, or we could be forced to modify our processes to avoid infringement, which may not be possible at a reasonable cost, if at all, and which could result in substantial delay in our use of our platform for the discovery of new product candidates or potential targets. As a result of patent infringement claims, or in order to avoid potential claims, we may choose to seek, or be required to seek, a license from the third party and would most likely be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we were able to obtain a license, we may be unable to maintain such licenses and the rights may be nonexclusive, which would give our competitors access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or forced to redesign it, or to cease our use of APECCS or some other aspect of our drug discovery and development platform or our business operations if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms, or unable to maintain such licenses when granted. Even if we are successful in defending against such claims, such litigation can be expensive and time consuming to litigate and would divert management’s attention from our core business. Any of these events could harm our business significantly.

In addition to infringement claims against us, if third parties prepare and file patent applications in the United States that also claim technology similar or identical to ours, we may have to participate in interference or derivation proceedings in the United States Patent and Trademark Office (the “USPTO”) to determine which party is entitled to a patent on the disputed invention. We may also become involved in similar opposition proceedings in the European Patent Office or similar offices in other jurisdictions regarding our intellectual property rights with respect to our products and technology. Since patent applications are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates.

If our intellectual property related to our product candidates is not adequate or if we are not able to protect our trade secrets or our confidential information, we may not be able to compete effectively in our market.

We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our product candidates, our drug discovery and development platform and our development programs. Any disclosure to or misappropriation by third parties of our confidential or proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or license may fail to result in issued patents in the United States or in foreign countries. Additionally, our research and development efforts may result in product candidates for which patent protection is limited or not available. Even if patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. For example, U.S. patents can be challenged by any person before the new USPTO Patent Trial and Appeals Board at any time before one year after that person is served an infringement complaint based on the patents. Patents granted by the European Patent Office may be similarly opposed by any person within nine months from the publication of the grant. Similar proceedings are available in other jurisdictions, and in the United States, Europe and other jurisdictions third parties can raise questions of validity with a patent office even before a patent has granted. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. For example, a third party may develop a competitive product that provides therapeutic benefits similar to one or more of our product candidates but has a sufficiently different composition to fall outside the scope of our patent protection. If the breadth or strength of protection provided by the patents and patent applications we hold or pursue with respect to our product candidates is successfully challenged, then our ability to commercialize such product candidates could be negatively affected, and we may face unexpected competition that could have a material adverse impact on our business. Further, if we encounter delays in our clinical trials, the period of time during which we or our collaboration partners could market tenapanor or other product candidates under patent protection would be reduced.

Even where laws provide protection, costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and the outcome of such litigation would be uncertain. If we or one of our collaboration partners were to initiate legal proceedings against a third party to enforce a patent covering the product candidate, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability against our intellectual property related to a product candidate, we would lose at least part, and perhaps all, of the patent protection on such product candidate. Such a loss of patent protection would have a material adverse impact on our business. Moreover, our competitors could counterclaim that we infringe their intellectual property, and some of our competitors have substantially greater intellectual property portfolios than we do.

We also rely on trade secret protection and confidentiality agreements to protect proprietary know-how that may not be patentable, processes for which patents may be difficult to obtain and/or enforce and any other elements of our drug discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Although we require all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information or technology, to assign their inventions to us, and endeavor to execute confidentiality agreements with all such parties, we cannot be certain that we have executed such agreements with all parties who may have helped to develop our intellectual property or who had access to our proprietary information, nor can we be certain that our agreements will not be breached by such consultants, advisors or third parties, or by our former employees. The breach of such agreements by individuals or entities who are actively involved in the discovery and design of our potential drug candidates, or in the development of our discovery and design platform, including APECCS, could require us to pursue legal action to protect our trade secrets and confidential information, which would be expensive, and the outcome of which would be unpredictable. If we are not successful in prohibiting the continued breach of such agreements, our business could be negatively impacted. We cannot guarantee that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques.

Further, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent material disclosure of the intellectual property related to our technologies to third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, results of operations and financial condition.

If we do not obtain patent term extension in the United States under the Hatch-Waxman Act and in foreign countries under similar legislation, thereby potentially extending the term of marketing exclusivity for our product candidates, our business may be materially harmed.

Following the approval by the FDA for our NDA to market tenapanor for IBS-C, we became eligible to seek and sought patent term restoration under the Hatch-Waxman Act for one of the U.S. patents covering our approved product or the use thereof. The Hatch-Waxman Act allows a maximum of one patent to be extended per FDA approved product. Patent term extension also may be available in certain foreign countries upon regulatory approval of our product candidates. Despite seeking patent term extension for tenapanor or other product candidates, we may not be granted patent term extension either in the United States or in any foreign country because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the term of extension, as well as the scope of patent protection during any such extension, afforded by the governmental authority could be less than we request.

If we are unable to obtain patent term extension or restoration, or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions to maintain patent applications and issued patents. Noncompliance with these requirements can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case.

We may not be able to enforce our intellectual property rights throughout the world.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to life sciences. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties.

Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business. Furthermore, while we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our products. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain and enforce adequate intellectual property protection for our technology.

We may be subject to claims that we or our employees have misappropriated the intellectual property, including know-how or trade secrets, of a third party, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, consultants and contractors were previously employed at or engaged by other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these employees, consultants and contractors, executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment. Although we try to ensure that our employees, consultants and contractors do not use the intellectual property and other proprietary information or know-how or trade secrets of others in their work for us, and do not perform work for us that is in conflict with their obligations to another employer or any other entity, we may be subject to claims that we or these employees, consultants and contractors have used or disclosed such intellectual property, including know-how, trade secrets or other proprietary information. In addition, an employee, advisor or consultant who performs work for us may have obligations to a third party that are in conflict with their obligations to us, and as a result such third party may claim an ownership interest in the intellectual property arising out of work performed for us. We are not aware of any threatened or pending claims related to these matters, but in the future litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, or access to consultants and contractors. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

In addition, while we typically require our employees, consultants and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own, which may result in claims by or against us related to the ownership of such intellectual property. If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our management and scientific personnel.

Risks Related to Our Common Stock

Our stock price may be volatile and our stockholders may not be able to resell shares of our common stock at or above the price they paid.

The trading price of our common stock is highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include those discussed in this “Risk Factors” section and others such as:

- results from, or any delays in, clinical trial programs relating to our product candidates;

- the success of our efforts to establish a collaboration partnership for the commercialization of tenapanor for IBS-C in the United States;
- our ability, alone or with collaboration partners, to commercialize or obtain regulatory approval for tenapanor, or delays in commercializing or obtaining regulatory approval;
- announcements of regulatory approval, results of regulatory inspections of our facilities or those of our contract manufacturing organizations, or specific label restrictions or patient populations for tenapanor's use, or changes or delays in the regulatory review process;
- announcements relating to our current or future collaboration partnerships;
- announcements of therapeutic innovations or new products by us or our competitors;
- adverse actions taken by regulatory agencies with respect to our product label, our clinical trials, manufacturing supply chain or sales and marketing activities;
- changes or developments in laws or regulations applicable to our product candidates;
- the success of our testing and clinical trials;
- failure to meet any of our projected timelines or goals with regard to the clinical development of any of our product candidates;
- the success of our efforts to acquire or license or discover additional product candidates;
- any intellectual property infringement actions in which we may become involved;
- the success of our efforts to obtain adequate intellectual property protection for our product candidates;
- announcements concerning our competitors or the pharmaceutical industry in general;
- achievement of expected product sales and profitability;
- manufacture, supply or distribution shortages;
- actual or anticipated fluctuations in our operating results;
- FDA or other U.S. or foreign regulatory actions affecting us or our industry or other healthcare reform measures in the United States;
- changes in financial estimates or recommendations by securities analysts;
- trading volume of our common stock;
- sales of our common stock by us, our executive officers and directors or our stockholders in the future;
- sales of debt securities and sales or licensing of assets;
- general economic and market conditions and overall fluctuations in the United States equity markets; and

- the loss of any of our key scientific or management personnel.

In addition, the stock markets in general, and the markets for pharmaceutical, biopharmaceutical and biotechnology stocks in particular, have experienced extreme volatility that may have been unrelated to the operating performance of the issuer. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock. In the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the issuer. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the attention of our management would be diverted from the operation of our business, which could seriously harm our financial position. Any adverse determination in litigation could also subject us to significant liabilities.

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

Based on the number of shares outstanding as of March 31, 2020, our officers, directors and affiliated stockholders who hold at least 5% of our stock together beneficially own approximately 51.8% of our outstanding common stock. If these officers, directors, and principal stockholders or a group of our principal stockholders act together, they will be able to exert a significant degree of influence over our management and affairs and control matters requiring stockholder approval, including the election of directors, amendments to our organizational documents, and approval of any merger, sale of assets or other business combination transactions. The interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders. For instance, officers, directors and principal stockholders, acting together, could cause us to enter into transactions or agreements that we would not otherwise consider. Similarly, this concentration of ownership may have the effect of delaying or preventing a change in control of our company otherwise favored by our other stockholders. As of March 31, 2020, entities affiliated with New Enterprise Associates, or NEA, a venture capital fund, collectively beneficially owned approximately 19.4% of our common stock, including shares that NEA has the right to acquire within 60 days of March 31, 2020 upon exercise of warrants held by NEA.

If we sell shares of our common stock in future financings, stockholders may experience immediate dilution and, as a result, our stock price may decline.

We may from time to time issue additional shares of common stock at a discount from the current trading price of our common stock. As a result, our stockholders would experience immediate dilution upon the purchase of any shares of our common stock sold at such discount. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, preferred stock or common stock. If we issue common stock or securities convertible into common stock, our common stockholders would experience additional dilution and, as a result, our stock price may decline.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline. As of March 31, 2020, we had 89,035,096 shares of common stock outstanding. Of those shares, approximately 43.9 million were held by current directors, executive officers and stockholders owning 5% or more of our outstanding common stock.

As of March 31, 2020, approximately 0.8 million shares of common stock issuable upon vesting of outstanding restricted stock units and approximately 8.8 million shares of common stock issuable upon exercise of outstanding options were eligible for sale in the public market to the extent permitted by the provisions of the applicable vesting schedules, and Rule 144 and Rule 701 under the Securities Act. In addition, as of March 31, 2020, approximately 2.2 million shares of common stock issuable upon exercise of outstanding warrants were eligible for sale in the public market. If these additional shares of common stock are issued and sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could significantly reduce the value of our shares to a potential acquirer or delay or prevent changes in control or changes in our management without the consent of our board of directors. The provisions in our charter documents include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the required approval of at least two-thirds of the shares entitled to vote to remove a director for cause, and the prohibition on removal of directors without cause;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- the ability of our board of directors to alter our bylaws without obtaining stockholder approval;
- the required approval of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chairman of the board of directors, the chief executive officer, the president or the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

In addition, these provisions would apply even if we were to receive an offer that some stockholders may consider beneficial.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws and our indemnification agreements that we have entered into with our directors and officers provide that:

- We will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful.

- We may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law.

- We are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification.

- We will not be obligated pursuant to our amended and restated bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors or brought to enforce a right to indemnification.

- The rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons.

- We may not retroactively amend our amended and restated bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

We do not currently intend to pay dividends on our common stock, and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Additionally, the terms of our loan and security agreements could restrict our ability to pay dividends. Therefore, our stockholders are not likely to receive any dividends on our common stock for the foreseeable future. Since we do not intend to pay dividends, our stockholders' ability to receive a return on their investment will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which our holders have purchased it.

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

Effective May 16, 2018, we entered into a loan and security agreement pursuant to which the Lenders agreed to provide us a $50.0 million term loan facility. Covenants in the loan and security agreement limit our ability to pay dividends or make other distributions. For additional information refer to "NOTE 5. BORROWINGS" in the notes to our unaudited condensed financial statements in Part I, Item 1, *Condensed Financial Statements*, of this Quarterly Report on Form 10 Q.

Unregistered Sales of Equity Securities

None.

Use of Proceeds

Not applicable.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. Exhibits

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
31.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Certification of Principal Financial and Accounting Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1	Certification of Chief Executive Officer and Principal Financial and Accounting Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
101	The following financial statements, formatted in XBRL: (i) Condensed Balance Sheets as of March 31, 2020 and December 31, 2019, (ii) Condensed Statements of Operations and Comprehensive Loss for the three months ended March 31, 2020 and 2019, (iii) Condensed Statements of Cash Flows for the nine months ended March 31, 2020 and 2019, and (iv) Notes to Unaudited Condensed Financial Statements.				X

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.

Ardelyx, Inc.

Date: May 7, 2020

By:/s/ Keith Santorelli

Keith Santorelli
Acting Principal Financial and Accounting Officer

Exhibit 31.1

CERTIFICATION

I, Michael Raab, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: May 7, 2020

By: /s/ Michael Raab

Michael Raab
President Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Keith Santorelli, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: May 7, 2020

By: /s/ Keith Santorelli
Keith Santorelli
Acting Principal Financial and Accounting Officer

Exhibit 32.1

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

In connection with the Quarterly Report of Ardelyx, Inc. (the "Company") on Form 10-Q for the period ending March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Michael Raab, President and Chief Executive Officer of the Company, and Keith Santorelli, Acting Principal Financial and Accounting Officer of the Company, respectively, do each hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 7, 2020

By: /s/ Michael Raab
Michael Raab
President Chief Executive Officer and Director
(Principal Executive Officer)

Date: May 7, 2020

By: /s/ Keith Santorelli
Keith Santorelli
Acting Principal Financial and Accounting Officer