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

FORM 10-Q

☒ **Quarterly Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934**

For the quarterly period ended March 31, 2017

or

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the Transition Period From _____ to _____ .

Commission File Number: 001-33093

LIGAND PHARMACEUTICALS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**77-0160744**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
3911 Sorrento Valley Boulevard, Suite 110 San Diego, CA	**92121**
(Address of principal executive offices)	**(Zip Code)**

(858) 550-7500

(Registrant's Telephone Number, Including Area Code)

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

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

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

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-Accelerated Filer	☐ (Do not check if a smaller reporting company)	Smaller Reporting Company	☐
Emerging growth company	☐		

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

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

As of May 1, 2017, the registrant had 20,996,049 shares of common stock outstanding.

LIGAND PHARMACEUTICALS INCORPORATED
QUARTERLY REPORT

FORM 10-Q

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GLOSSARY OF TERMS AND ABBREVIATIONS

Abbreviation	Definition
2019 Convertible Senior Notes	$245.0 million aggregate principal amount of convertible senior unsecured notes due 2019
Amgen	Amgen, Inc.
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Company	Ligand Pharmaceuticals Incorporated, including subsidiaries
CorMatrix	CorMatrix Cardiovascular, Inc.
CVR	Contingent value right
CyDex	CyDex Pharmaceuticals, Inc.
Amended ESPP	Employee Stock Purchase Plan, as amended and restated
FASB	Financial Accounting Standards Board
FDA	Food and Drug Administration
GAAP	Generally accepted accounting principles in the United States
IPR&D	In-Process Research and Development
Ligand	Ligand Pharmaceuticals Incorporated, including subsidiaries
LSA	Loan and Security Agreement
Metabasis	Metabasis Therapeutics, Inc.
MLA	Master License Agreement
NOLs	Net Operating Losses
OMT	OMT, Inc. or Open Monoclonal Technology, Inc.
Par	Par Pharmaceuticals, Inc.
Retrophin	Retrophin Inc.
Q1 2017	The Company's fiscal quarter ended March 31, 2017
Q1 2016	The Company's fiscal quarter ended March 31, 2016
SEC	Securities and Exchange Commission
Selexis	Selexis, SA
Viking	Viking Therapeutics

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands, except share data)

	March 31, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$ 10,641	$ 18,752
Short-term investments	148,733	122,296
Accounts receivable	7,057	14,700
Note receivable from Viking	—	3,207
Inventory	7,629	1,923
Other current assets	641	2,175
Total current assets	174,701	163,053
Deferred income taxes	141,007	123,891
Investment in Viking	7,262	8,345
Note receivable from Viking	3,207	—
Intangible assets, net	201,990	204,705
Goodwill	72,207	72,207
Commercial license rights, net	25,630	25,821
Property and equipment, net	1,898	1,819
Other assets	1,821	1,744
Total assets	$ 629,723	$ 601,585
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,456	$ 2,734
Accrued liabilities	4,680	6,397
Current contingent liabilities	111	5,088
2019 Convertible Senior Notes, net	215,748	212,910
Total current liabilities	226,995	227,129
Long-term contingent liabilities	3,035	2,916
Other long-term liabilities	915	687
Total liabilities	230,945	230,732
Commitments and Contingencies		
Equity component of currently redeemable convertible notes (Note 5)	26,948	29,563
Stockholders' equity:		
Common stock, $0.001 par value; 33,333,333 shares authorized; 20,996,049 and 20,909,301 shares issued and outstanding at March 31, 2017 and December 31, 2016, respectively	21	21
Additional paid-in capital	777,102	769,653
Accumulated other comprehensive income	3,105	2,743
Accumulated deficit	(408,398)	(431,127)
Total stockholders' equity	371,830	341,290
Total liabilities and stockholders' equity	$ 629,723	$ 601,585

See accompanying notes.

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(in thousands, except per share amounts)

	Three months ended March 31,	
	2017	**2016**
Revenues:		
Royalties	$ 24,230	$ 14,390
Material sales	1,121	5,341
License fees, milestones and other revenues	3,916	9,917
Total revenues	29,267	29,648
Operating costs and expenses:		
Cost of sales [1]	341	955
Amortization of intangibles	2,715	2,524
Research and development	8,673	4,004
General and administrative	7,322	7,069
Total operating costs and expenses	19,051	14,552
Income from operations	10,216	15,096
Other (expense) income:		
Interest expense, net	(2,941)	(3,005)
Increase in contingent liabilities	(140)	(1,306)
Loss from Viking	(1,083)	(1,605)
Other income, net	141	391
Total other expense, net	(4,023)	(5,525)
Income before income taxes	6,193	9,571
Income tax expense	(1,114)	(3,694)
Income from operations	5,079	5,877
Discontinued operations:		
Gain on sale of Oncology Product Line before income taxes	—	1,139
Income tax expense on discontinued operations	—	(408)
Income from discontinued operations	—	731
Net income	$ 5,079	$ 6,608
Per share amounts attributable to Ligand common shareholders:		
Basic earnings per share data[2]		
Income from continuing operations	$ 0.24	$ 0.28
Income from discontinued operations	—	0.04
Net income	$ 0.24	$ 0.32
Diluted earnings per share data [2]		
Income from continuing operations	$ 0.22	$ 0.26
Income from discontinued operations	—	0.03
Net income	$ 0.22	$ 0.30
Shares used for computation (in thousands)		
Basic	20,938	20,708
Diluted	23,019	22,284

(1) Excludes amortization of intangibles.
(2) The sum of net income per share amounts may not equal the totals due to rounding.

See accompanying notes.

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)
(in thousands)

	Three months ended March 31,	
	2017	**2016**
Net income:	$ 5,079	$ 6,608
Unrealized net gain on available-for-sale securities, net of tax	(66)	(1,098)
Less: Reclassification of net realized (gain)/loss included in net income, net of tax of $202	428	(236)
Comprehensive income	$ 5,441	$ 5,274

See accompanying notes.

LIGAND PHARMACEUTICAL INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Three months ended March 31,	
	2017	**2016**
Operating activities		
Net income	$ 5,079	$ 6,608
Less: income from discontinued operations	—	731
Income from continuing operations	5,079	5,877
Adjustments to reconcile net income to net cash provided by operating activities:		
Non-cash change in estimated fair value of contingent liabilities	140	1,306
Realized gain on sale of short-term investment	(66)	(406)
Depreciation and amortization	2,979	2,575
Amortization of premium (discount) on investments, net	(46)	320
Amortization of debt discount and issuance fees	2,838	2,668
Stock-based compensation	6,045	4,118
Deferred income taxes	1,018	4,101
Change in fair value of the Viking convertible debt receivable and warrants	(76)	15
Loss from Viking	1,083	1,605
Changes in operating assets and liabilities:		
Accounts receivable	7,643	(5,604)
Inventory	(1,197)	853
Other current assets	745	16
Accounts payable and accrued liabilities	(1,963)	(4,302)
Other	—	(28)
Net cash provided by operating activities	24,222	13,114
Investing activities		
Payments to CVR holders and other contingency payments	(4,998)	(5,446)
Purchases of property and equipment	(87)	(238)
Cash paid for acquisition, net of cash acquired	—	(92,855)
Purchase of short-term investments	(73,352)	(49,892)
Proceeds from sale of short-term investments	17,719	20,270
Proceeds from maturity of short-term investments	30,052	48,401
Net cash used in investing activities	(30,666)	(79,760)
Financing activities		
Net proceeds from stock option exercises and ESPP	355	1,013
Taxes paid related to net share settlement of equity awards	(2,022)	—
Share repurchase	—	(502)
Net cash (used in) provided by financing activities	(1,667)	511
Net decrease in cash and cash equivalents	(8,111)	(66,135)
Cash and cash equivalents at beginning of period	18,752	97,428
Cash and cash equivalents at end of period	$ 10,641	$ 31,293
Supplemental disclosure of cash flow information		
Interest paid	$ 919	$ 919
Taxes paid	96	1
Supplemental schedule of non-cash activity		
Stock issued for acquisition, net of issuance cost	—	(77,615)
Accrued inventory purchases	3,909	600
Unrealized loss on AFS investments	(66)	(1,834)

See accompanying notes

LIGAND PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The Company's accompanying unaudited condensed consolidated financial statements have been prepared in accordance with GAAP for interim financial information. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation of the financial position and results of operations of the Company and its subsidiaries, have been included. Interim financial results are not necessarily indicative of the results that may be expected for the full year. These financial statements should be read in conjunction with the consolidated financial statements and notes therein included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed on February 28, 2017.

The accompanying condensed consolidated financial statements include Ligand and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation

Upon the occurrence of certain circumstances, holders of the 2019 Convertible Senior Notes may redeem all or a portion of their notes, which may require the use of a substantial amount of cash. At March 31, 2017, we had a working capital deficit of $52.3 million, which includes the 2019 Convertible Senior Notes that are currently redeemable as of March 31, 2017 but excludes another $26.9 million that is classified as mezzanine equity. As noted in Note 3, the debt may change from current to non-current period over period, primarily as a result of changes in the Company's stock price. Management believes that it is remote that holders of the notes would choose to convert their notes early because the fair value of the security that a noteholder can currently realize in an active market is greater than the conversion value the noteholder would realize upon early conversion. In the unlikely event that all the debt was converted, we have three business days following a 50 trading day observation period from the conversion date to pay the principal in cash. We have positive operating income and positive cash flow from operations since December 31, 2013 and, accordingly, while there can be no assurance, we believe we have the ability to raise additional capital through an S-3 registration or via alternative financing arrangements such as convertible or straight debt.

Significant Accounting Policies

The Company describes its significant accounting policies in Note 1 to the financial statements in Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2016.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with GAAP requires the use of estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and the accompanying notes. Actual results may differ from those estimates.

Accounting Pronouncements Recently Adopted

In March 2016, the FASB issued *ASU 2016-09, Improvements to Employee Share-Based Payment Accounting*, which is intended to simplify several aspects of the accounting for stock-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The Company adopted ASU 2016-09 in the first quarter of fiscal year 2017. As a result of the adoption, the Company recorded a $17.9 million cumulative-effect adjustment to retained earnings for the recognition of excess tax benefits generated by the settlement of stock-based awards in prior periods and a discrete income tax benefit of $0.9 million to the income tax provision for excess tax benefits generated by the settlement, in the first quarter of fiscal year 2017, of stock-based awards. As allowed by the new guidance, the Company has elected to account for equity award forfeitures as they occur, and recorded a $0.3 million cumulative-effect adjustment to retained earnings for this accounting change in prior periods.

Recent Accounting Pronouncements

In May 2014, the FASB issued new guidance related to revenue recognition, ASU 2014-09, *Revenue from Contracts with Customers ("ASC 606")*, which outlines a comprehensive revenue recognition model and supersedes most current revenue recognition guidance. The new guidance requires a company to recognize revenue upon transfer of goods or services to a customer at an amount that reflects the expected consideration to be received in exchange for those goods or services. ASC 606 defines a five-step approach for recognizing revenue, which may require a company to use more judgment and make more estimates than under the current guidance. Two methods of adoption are permitted: (a) full retrospective adoption, meaning the standard is applied to all periods presented; or (b) modified retrospective adoption, meaning the cumulative effect of applying the new guidance is recognized at the date of initial application as an adjustment to the opening retained earnings balance.

We are undertaking a substantial effort to be ready for adoption of ASC 606. Some of our contracts have distinct terms which will need to be evaluated separately. Although we have not completed our assessment and are in the process of reviewing our contracts, we anticipate that this standard will have a material impact on our consolidated financial statements by accelerating the timing of revenue recognition for revenues related to royalties, and potentially certain contingent milestone based payments. We intend to adopt ASC 606 starting as of January 1, 2018 using the modified retrospective method.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities.* ASU 2016-01 modifies certain aspects of the recognition, measurement, presentation, and disclosure of financial instruments. ASU 2016-01 is effective for fiscal years beginning after December 15, 2017, and early adoption is permitted. We do not expect the adoption of this standard to have a material impact on our financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. This new standard will make eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. The standard is effective for us in the first quarter of 2018. The standard will require adoption on a retrospective basis unless it is impracticable to apply, in which case we would be required to apply the amendments prospectively as of the earliest date practicable. We are currently evaluating the impact of our pending adoption of ASU 2016-15 on our consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805), Clarifying the Definition of a Business*, which changes the definition of a business to assist entities with evaluating when a set of assets acquired or disposed of should be considered a business. The new standard requires an entity to evaluate if substantially all the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets; if so, the set would not be considered a business. The new standard also requires a business to include at least one substantive process and narrows the definition of outputs. We expect that these provisions will reduce the number of transactions that will be considered a business. The new standard is effective for interim and annual periods beginning on January 1, 2018, and may be adopted earlier. The standard would be applied prospectively to any transaction occurring on or after the adoption date. We are currently evaluating the impact that this new standard will have on our consolidated financial statements.

Short-term Investments

The Company's investments consist of the following at March 31, 2017 and December 31, 2016 (in thousands):

	March 31, 2017				December 31, 2016			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
Short-term investments								
Bank deposits	$ 61,605	$ 23	$ (10)	$ 61,618	$ 40,715	$ 19	$ —	$ 40,734
Corporate bonds	32,237	2	(17)	32,222	11,031	—	(5)	11,026
Commercial paper	23,328	1	(5)	23,324	33,074	2	(9)	33,067
Agency bonds	—	—	—	—	7,294	1	—	7,295
U.S Government Bonds	11,020	—	(6)	11,014	7,508	—	(1)	7,507
Municipal Bonds	18,143	2	(1)	18,144	19,624	—	(11)	19,613
Corporate equity securities	300	2,111	—	2,411	1,512	1,542	—	3,054
	$ 146,633	$ 2,139	$ (39)	$ 148,733	$ 120,758	$ 1,564	$ (26)	$ 122,296

Inventory

Inventory, which consists of finished goods, is stated at the lower of cost or market value. The Company determines cost using the first-in, first-out method.

Goodwill and Other Identifiable Intangible Assets

Goodwill and other identifiable intangible assets consist of the following (in thousands):

	March 31, 2017	December 31, 2016
Indefinite lived intangible assets		
IPR&D	$ 12,246	$ 12,246
Goodwill	72,207	72,207
Definite lived intangible assets		
Complete technology	182,577	182,577
Less: Accumulated amortization	(15,104)	(12,792)
Trade name	2,642	2,642
Less: Accumulated amortization	(817)	(784)
Customer relationships	29,600	29,600
Less: Accumulated amortization	(9,154)	(8,784)
Total goodwill and other identifiable intangible assets, net	$ 274,197	$ 276,912

Commercial License Rights

Commercial License Rights consist of the following (in thousands):

	March 31, 2017	December 31, 2016
CorMatrix	$ 17,696	$ 17,696
Selexis	8,602	8,602
	26,298	26,298
Less: accumulated amortization	(668)	(477)
Total commercial license rights, net	$ 25,630	$ 25,821

Equity-Method Investment

The Company has approximately 26.3% equity ownership in Viking as of March 31, 2017. The Company records its investment in Viking under the equity method of accounting. The investment is subsequently adjusted for the Company's share of Viking's operating results, and if applicable, cash contributions and distributions. As of March 31, 2017 and December 31, 2016, the carrying amounts of the Company's investment in Viking were $7.3 million and $8.3 million, respectively. The market value of the Company's equity investment in Viking was $9.2 million as of March 31, 2017. The Company also has outstanding warrants to purchase 1.5 million shares of Viking's common stock at an exercise price of $1.50 per share at March 31, 2017. The Company recorded the warrants at the fair value of $0.8 million and $0.7 million at March 31, 2017 and December 31, 2016, respectively. See *Note 2 Fair Value Measurement* for details.

In addition, the Company currently has an active MLA with Viking, under which the Company licensed Viking the rights to five programs. The Company is entitled to receive contingent event-based payments and royalties from Viking based on the progression and eventual sale of any products being developed by Viking under the MLA. No such payment was earned or recognized during three months ended March 31, 2017 and 2016.

The Company also has a convertible note receivable from Viking under the LSA. Under the terms of the LSA, the principal amount outstanding accrues interest at a fixed rate of 2.5% with maturity date of May 21, 2017. On May 8, 2017, the

Company entered into an amendment to the LSA, which amends to, among other things, (i) extend the maturity date of the outstanding convertible notes receivable under the LSA from May 21, 2017 to May 21, 2018 and (ii) cause Viking to pay to the Company, no later than July 15, 2017, a cash amount of $0.2 million, which payment shall reduce first the accrued and unpaid interest and second the unpaid principal amount on the Viking Note by $0.50 for each $1.00 of value. The Company elected to record the convertible notes at fair value, which was $3.2 million at March 31, 2017 and December 31, 2016. See *Note 2 Fair Value Measurement* for details.

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	March 31, 2017	December 31, 2016
Compensation	$ 1,356	$ 2,603
Professional fees	799	829
Amounts owed to former licensees	890	899
Royalties owed to third parties	989	942
Other	646	1,124
Total accrued liabilities	$ 4,680	$ 6,397

Stock-Based Compensation

Stock-based compensation expense for awards to employees and non-employee directors is recognized on a straight-line basis over the vesting period until the last tranche vests. The following table summarizes stock-based compensation expense recorded as components of research and development expenses and general and administrative expenses for the periods indicated (in thousands):

	Three months ended March 31,	
	2017	2016
Stock-based compensation expense as a component of:		
Research and development expenses	$ 3,939	$ 1,585
General and administrative expenses	2,106	2,533
	$ 6,045	$ 4,118

The fair-value for options that were awarded to employees and directors was estimated at the date of grant using the Black-Scholes option valuation model with the following weighted-average assumptions:

	Three months ended March 31,	
	2017	2016
Risk-free interest rate	2.1%	1.5%
Dividend yield	—	—
Expected volatility	47%	50%
Expected term	6.9	6.6

Lease Obligations

The Company describes its operating lease obligations in Note 5 to the financial statements in Item 8 of its Annual Report on Form 10-K for the year ended December 31, 2016. There were no significant changes in the Company's operating lease commitments during the first three months of 2017.

Convertible Debt

In August 2014, the Company completed a $245.0 million offering of 2019 Convertible Senior Notes, which bear interest at 0.75%. The Company accounted for the 2019 Convertible Senior Notes by separating the liability and equity components of the instrument in a manner that reflects the Company's nonconvertible debt borrowing rate. As a result, the Company assigned a value to the debt component of the 2019 Convertible Senior Notes equal to the estimated fair value of similar debt instruments without the conversion feature, which resulted in the Company recording the debt instrument at a discount. The Company is amortizing the debt discount over the life of the 2019 Convertible Senior Notes as additional non-cash interest expense utilizing the effective interest method.

Upon the occurrence of certain circumstances, holders of the 2019 Convertible Senior Notes may redeem all or a portion of their notes, which may require the use of a substantial amount of cash. At March 31, 2017, we had a working capital deficit of $52.3 million, which includes the 2019 Convertible Senior notes that are currently redeemable as of March 31, 2017 but excludes another $26.9 million that is classified as mezzanine equity. As noted in Note 3, the debt may change from current to non-current period over period, primarily as a result of changes in the Company’s stock price. Management believes that it is remote that holders of the notes would choose to convert their notes early because the fair value of the security that a noteholder can currently realize in an active market is greater than the conversion value the noteholder would realize upon early conversion. In the unlikely event that all the debt was converted, we have three business days following a 50 trading day observation period from the convert date to pay the principal in cash. We have positive operating income and positive cash flow from operations since December 31, 2013 and, accordingly, while there can be no assurance, we believe we have the ability to raise additional capital through an S-3 registration or via alternative financing arrangements such as convertible or straight debt.

Income Per Share

Basic income per share is calculated by dividing net income by the weighted-average number of common shares outstanding during the period. Diluted income per share is computed based on the sum of the weighted average number of common shares and potentially dilutive common shares outstanding during the period.

Potentially dilutive common shares consist of shares issuable under 2019 Convertible Senior Notes, stock options and restricted stock. The 2019 Convertible Senior Notes have a dilutive impact when the average market price of the Company’s common stock exceeds the applicable conversion price of the notes. Potentially dilutive common shares from stock options and restricted stock are determined using the average share price for each period under the treasury stock method. In addition, proceeds from exercise of stock options and the average amount of unrecognized compensation expense for restricted stock are assumed to be used to repurchase shares. In loss periods, basic net loss per share and diluted net loss per share are identical because the otherwise dilutive potential common shares become anti-dilutive and are therefore excluded.

The following table presents the calculation of weighted average shares used to calculate basic and diluted earnings per share:

	Three months ended March 31,	
	2017	2016
Weighted average shares outstanding:	20,937,627	20,707,926
Dilutive potential common shares:		
Restricted stock	185,745	66,736
Stock options	954,509	759,581
2019 Convertible Senior Notes	941,308	749,736
Shares used to compute diluted income per share	23,019,189	22,283,979
Potentially dilutive shares excluded from calculation due to anti-dilutive effect	3,711,067	3,493,425

2. Fair Value Measurements

The following table presents the Company's hierarchy for assets and liabilities measured at fair value on a recurring basis as of March 31, 2017 (in thousands).

	March 31, 2017				December 31, 2016			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Short-term investments[1]	$ 2,410	$ 146,323	$ —	$ 148,733	$ 3,054	$ 119,242	$ —	$ 122,296
Note receivable Viking [2]	—	—	3,207	3,207	—	—	3,207	3,207
Investment in warrants [3]	760	—	—	760	684	—	—	684
Total assets	$ 3,170	$ 146,323	$ 3,207	$ 152,700	$ 3,738	$ 119,242	$ 3,207	$ 126,187
Liabilities:								
Current contingent liabilities-CyDex [4]	$ —	$ —	$ 111	$ 111	$ —	$ —	$ 101	$ 101
Long-term contingent liabilities-CyDex [4]	—	—	1,503	1,503	—	—	1,503	1,503
Long-term contingent liabilities-Metabasis [5]	—	1,532	—	1,532	—	1,413	—	1,413
Liability for amounts owed to former licensees[6]	362	—	—	362	371	—	—	371
Total liabilities	$ 362	$ 1,532	$ 1,614	$ 3,508	$ 371	$ 1,413	$ 1,604	$ 3,388

(1) Investments in equity securities, which the Company received as a result of event-based and upfront payments from licensees, are classified as level 1 as the fair value is determined using quoted market prices in active markets for the same securities. Short-term investments in marketable securities with maturities greater than 90 days are classified as level 2 of the fair value hierarchy, as these investment securities are valued based upon quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.

(2) The fair value of the convertible note receivable from Viking was determined using a probability weighted option pricing model using a lattice methodology. The fair value is subjective and is affected by certain significant input to the valuation model such as the estimated volatility of the common stock, which was estimated to be 75% at March 31, 2017. Changes in these assumptions may materially affect the fair value estimate.

(3) Investment in warrants, which the Company received as a result of Viking's partial repayment of the Viking note receivable and the Company's purchase of Viking common stock and warrants in April 2016, are classified as level 1 as the fair value is determined using quoted market prices in active markets for the same securities. The change of the fair value is recorded in the other income or expenses in the Company's condensed consolidated statement of operations.

(4) The fair value of the liabilities for CyDex contingent liabilities were determined based on the income approach. To the extent the estimated future income may vary significantly given the long-term nature of the estimate, the Company utilizes a Monte Carlo model. The fair value is subjective and is affected by changes in inputs to the valuation model including management's estimates of timing and probability of achievement of certain revenue thresholds and developmental and regulatory milestones which may be achieved and affect amounts owed to former license holders. Changes in these assumptions can materially affect the fair value estimate.

(5) The liability for CVRs for Metabasis are determined using quoted prices in a market that is not active for the underlying CVR.

(6) The liability for amounts owed to former licensees are determined using quoted market prices in active markets for the underlying investment received from a partner, a portion of which is owed to former licensees.

The following table represents significant unobservable inputs used in determining the fair value of contingent liabilities assumed in the acquisition of CyDex:

	March 31, 2017	December 31, 2016
Revenue volatility	25%	25%
Average probability of commercialization	12.5%	12.5%
Market price of risk	0.03	0.03
Credit rating	BB	BB
Equity risk premium	6%	6%

There was no significant change in estimated fair value of the Viking note receivable and contingent consideration during the three months ended March 31, 2017.

Other Fair Value Measurements

2019 Convertible Senior Notes

In August 2014, the Company issued $245.0 million aggregate principal amount of its 2019 Convertible Senior Notes. The Company uses a quoted rate in a market that is not active, which is classified as a Level 2 input, to estimate the current fair value of its 2019 Convertible Senior Notes. The estimated fair value of the 2019 Senior Convertible Notes was $365.1 million as of March 31, 2017. The carrying value of the notes does not reflect the market rate. See Note 3 *Convertible Senior Notes* for additional information.

Viking

The Company records its investment in Viking under the equity method of accounting. See *Note 1 Significant Accounting Policies* for the fair value of the Company's equity investment in Viking.

3. Convertible Senior Notes

As of March 31, 2017, the Company had outstanding $245.0 million principal amount of 0.75% Convertible Senior Notes due August 15, 2019.

0.75% Convertible Senior Notes Due 2019

In August 2014, the Company issued $245.0 million aggregate principal amount of its 2019 Convertible Senior Notes, resulting in net proceeds of $239.3 million. The 2019 Convertible Senior Notes are convertible into common stock at an initial conversion rate of 13.3251 shares per $1,000 principal amount of convertible notes, subject to adjustment upon certain events, which is equivalent to an initial conversion price of approximately $75.05 per share of common stock. The notes bear cash interest at a rate of 0.75% per year, payable semi-annually.

Holders of the 2019 Convertible Senior Notes may convert the notes at any time prior to the close of business on the business day immediately preceding May 15, 2019, under any of the following circumstances:

(1) during any fiscal quarter (and only during such fiscal quarter) commencing after December 31, 2014, if, for at least 20 trading days (whether or not consecutive) during the 30 consecutive trading day period ending on the last trading day of the immediately preceding fiscal quarter, the last reported sale price of the Company's common stock on such trading day is greater than 130% of the conversion price on such trading day;

(2) during the five business day period immediately following any ten consecutive trading day period, in which the trading price per $1,000 principal amount of notes was less than 98% of the product of the last reported sale price of the Company's common stock on such trading day and the conversion rate on each such trading day; or

(3) upon the occurrence of certain specified corporate events as specified in the indenture governing the notes.

As of March 31, 2017, the Company's last reported sale price has exceeded the 130% threshold described above and accordingly the Convertible Notes have been classified as a current liability as of March 31, 2017. As a result, the related unamortized discount of $26.9 million was classified as temporary equity component of currently redeemable convertible notes on the Company's Condensed Consolidated Balance Sheet. The determination of whether or not the Convertible Notes are convertible as described above is made each quarter until maturity, conversion or repurchase. It is possible that the Convertible Notes may not be convertible in future periods, in which case the Convertible Notes would be classified as long-term debt, unless one of the other conversion events described above were to occur.

On or after May 15, 2019 until the close of business on the second scheduled trading day immediately preceding August 15, 2019, holders of the notes may convert all or a portion of their notes at any time, regardless of the foregoing circumstances. Upon conversion, the Company must deliver cash to settle the principal and may deliver cash or shares of common stock, at its option, to settle any premium due upon conversion.

The 2019 Convertible Senior Notes will have a dilutive effect to the extent the average market price per share of common stock for a given reporting period exceeds the conversion price of $75.05 per share. As of March 31, 2017, the "if-converted value" exceeded the principal amount of the 2019 Convertible Senior Notes by $100.5 million.

The following table summarizes information about the equity and liability components of the 2019 Convertible Senior Notes (in thousands).

	March 31, 2017	December 31, 2016
2019 Convertible Senior Notes		
Principal amount outstanding	$ 245,000	$ 245,000
Unamortized discount	(29,252)	(32,090)
Total current portion of notes payable	$ 215,748	$ 212,910

4. Income Tax

The Company's effective tax rate may vary from the U.S. federal statutory tax rate due to the change in the mix of earnings in various state jurisdictions with different statutory rates, benefits related to tax credits, and the tax impact of non-deductible expenses and other permanent differences between income before income taxes and taxable income. The effective tax rate for the three months ended March 31, 2017 was 18%. The variance from the U.S. federal statutory tax rate of 35% was primarily attributable to tax deductions related to stock award activities which were recorded as discrete items in the quarter. The effective tax rate for the three months ended March 31, 2016 was 39% and is different from the federal statutory rate primarily as a result of significant permanent book-to-tax differences and state taxes. The permanent differences include non-taxable contingent consideration income (expense) recorded related to the change in market value of contingent liabilities.

5. Stockholders' Equity

The Company grants options and awards to employees and non-employee directors pursuant to a stockholder approved stock incentive plan, which is described in further detail in Note 8, Stockholders' Equity, of Notes to Consolidated Financial Statements in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

The following is a summary of the Company's stock option and restricted stock activity and related information:

	Stock Options		Restricted Stock Awards	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Grant Date Fair Value
Balance as of December 31, 2016	1,754,275	$ 42.12	308,700	$ 86.61
Granted	180,765	100.81	64,155	100.91
Exercised	(29,412)	17.42	(96,744)	79.68
Forfeited	—	—	(300)	97.92
Balance as of March 31, 2017	1,905,628	$ 48.07	275,811	$ 92.36

As of March 31, 2017, outstanding options to purchase 1.3 million shares were exercisable with a weighted average exercise price per share of $33.06.

Employee Stock Purchase Plan

The price at which common stock is purchased under the Amended ESPP is equal to 85% of the fair market value of the common stock on the first or last day of the offering period, whichever is lower. During the three months ended March 31,

2017, approximately 829 shares were issued under the Amended ESPP. As of March 31, 2017, 70,297 shares were available for future purchases under the Amended ESPP.

6. Litigation

The Company records an estimate of a loss when the loss is considered probable and estimable. Where a liability is probable and there is a range of estimated loss and no amount in the range is more likely than any other number in the range, the Company records the minimum estimated liability related to the claim in accordance with *FASB ASC Topic 450 Contingencies.* As additional information becomes available, the Company assesses the potential liability related to its pending litigation and revises its estimates. Revisions in the Company's estimates of potential liability could materially impact its results of operations.

Securities Litigation

In 2012, a federal securities class action and shareholder derivative lawsuit was filed in Pennsylvania alleging that the Company and its Chief Executive Officer ("CEO") assisted various breaches of fiduciary duties based on the Company's purchase of a licensing interest in a development-stage pharmaceutical program from the Genaera Liquidating Trust in 2010 and the Company's subsequent sale of half of its interest in the transaction to Biotechnology Value Fund, Inc. Plaintiff filed a second amended complaint in February 2015, which the Company moved to dismiss in March 2015. The district court granted the motion to dismiss on November 11, 2015. The plaintiff has appealed that ruling to the Third Circuit. The Company intends to continue to vigorously defend against the claims against the Company and its CEO. The outcome of the matter is not presently determinable.

Class Action Lawsuit

In November 2016, a putative shareholder class action lawsuit was filed in the United States District Court for the Southern District of California against the Company, its chief executive officer and chief financial officer. The complaint alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, and Rule 10b-5 promulgated thereunder, and seeks unspecified compensatory damages and other relief on behalf of a purported class of purchasers of the Company's securities between November 9, 2015 and November 14, 2016, inclusive. The complaint's allegations relate generally to the Company's November 2016 restatement of certain prior period financial statements. In March 2017, the Court appointed a lead plaintiff and lead counsel for lead plaintiff and the class. The lead plaintiff's amended complaint, or election to designate the previously filed complaint as the operative complaint, is due May 15, 2017, and the Company's response to the complaint is due thereafter. No trial date has been set. The Company believes that the lawsuit is without merit and intends to vigorously defend against the lawsuit.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Caution: This discussion and analysis may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed in Part II, Item 1A:"Risk Factors." This outlook represents our current judgment on the future direction of our business. These statements include those related to our Captisol-related revenues, our Promacta, Kyprolis, and other product royalty revenues, product returns, and product development. Actual events or results may differ materially from our expectations. For example, there can be no assurance that our revenues or expenses will meet any expectations or follow any trend(s), that we will be able to retain our key employees or that we will be able to enter into any strategic partnerships or other transactions. We cannot assure you that we will receive expected Promacta, Kyprolis, Captisol and other product revenues to support our ongoing business or that our internal or partnered pipeline products will progress in their development, gain marketing approval or achieve success in the market. In addition, ongoing or future arbitration, or litigation or disputes with third parties may have a material adverse effect on us. Such risks and uncertainties, and others, could cause actual results to differ materially from any future performance suggested. We undertake no obligation to make any revisions to these forward-looking statements to reflect events or circumstances arising after the date of this quarterly report. This caution is made under the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Our trademarks, trade names and service marks referenced herein include Ligand. Each other trademark, trade name or service mark appearing in this quarterly report belongs to its owner.

References to "Ligand Pharmaceuticals Incorporated," "Ligand," the "Company," "we" or "our" include Ligand Pharmaceuticals Incorporated and our wholly owned subsidiaries.

Overview

We are a biopharmaceutical company focused on developing and acquiring technologies that help pharmaceutical companies discover and develop medicines. Over our 30 year history, we have employed research technologies such as nuclear receptor assays, high throughput computer screening, formulation science, liver targeted pro-drug technologies and antibody discovery technologies to assist companies in their work toward securing prescription drug approvals. We currently have partnerships and license agreements with over 92 pharmaceutical and biotechnology companies, and over 155 different programs under license with us are currently in various stages of commercialization and development. We have contributed novel research and technologies for approved medicines that treat cancer, osteoporosis, fungal infections and low blood platelets, among others. Our partners have programs currently in clinical development targeting seizure, coma, cancer, diabetes, cardiovascular disease, muscle wasting, liver disease, and kidney disease, among others. We have over 500 issued patents worldwide and over 200 currently pending patent applications.

We have assembled our large portfolio of fully-funded programs either by licensing our own proprietary drug development programs, licensing our platform technologies such as Captisol or OmniAb to partners for use with their proprietary programs, or acquiring existing partnered programs from other companies. Fully-funded programs are those for which our partners pay all of the development and commercialization costs. For our internal programs, we generally plan to advance drug candidates through early-stage drug development or clinical proof-of-concept. Our business model creates value for stockholders by providing a diversified portfolio of biotech and pharmaceutical product revenue streams that are supported by an efficient and low corporate cost structure. Our goal is to offer investors an opportunity to participate in the promise of the biotech industry in a profitable, diversified and lower-risk business than a typical biotech company.

Our business model is based on doing what we do best: drug discovery, early-stage drug development, product reformulation and partnering. We partner with other pharmaceutical companies to leverage what they do best (late-stage development, regulatory management and commercialization) to ultimately generate our revenue. We believe that focusing on discovery and early-stage drug development while benefiting from our partners' development and commercialization expertise will reduce our internal expenses and allow us to have a larger number of drug candidates progress to later stages of drug development. Our revenue consists of three primary elements: royalties from commercialized products, license and milestone payments and sale of Captisol material. In addition to discovering and developing our own proprietary drugs, we selectively pursue acquisitions to bring in new assets, pipelines, and technologies to aid in generating additional potential new revenue streams.

Portfolio Program Updates

Promacta®/Revolade®

- Novartis reported first quarter 2017 net sales of Promacta/Revolade (eltrombopag) of $175 million, a $44 million or 34% increase over the same period in 2016.
- Novartis reported Revolade (eltrombopag) was approved in Canada for the treatment of pediatric (≥1 years to <18 years) chronic immune thrombocytopenia purpura to increase platelet counts in patients who have had an insufficient response to corticosteroids or immunoglobulins.
- Novartis announced the publication of a study conducted by the National Institutes of Health demonstrating that 58% of patients with treatment-naïve severe aplastic anemia achieved complete response at six months when treated with eltrombopag at the initiation of and concurrent with standard immunosuppressive treatment. The data are published in the latest issue of *The New England Journal of Medicine*.

Kyprolis® (carfilzomib), an Amgen Product Utilizing Captisol

- On April 26, 2017, Amgen reported first quarter 2017 net sales of Kyprolis (carfilzomib) of $190 million, a $36 million or 23% increase over the same period in 2016.
- On February 28, 2017, Amgen announced positive results from a planned overall survival (OS) interim analysis of the Phase 3 head-to-head ENDEAVOR trial. The study met the key secondary endpoint of OS, demonstrating that patients with relapsed or refractory multiple myeloma treated with Kyprolis (carfilzomib) and dexamethasone (Kd) lived 7.6

months longer than those treated with Velcade® (bortezomib) and dexamethasone (Vd) (median OS 47.6 months for Kd versus 40.0 for Vd, HR = 0.79, 95 percent CI, 0.65 - 0.96).

- On March 1, 2017, Amgen announced that new data from the Kyprolis (carfilzomib) clinical development program would be presented at the 16th International Myeloma Workshop, March 1-4, 2017, in New Delhi.

Additional Pipeline and Partner Developments

- Melinta Therapeutics announced that the new drug applications (NDAs) for IV and oral Baxdela™ (delafloxacin) for the treatment of patients with acute bacterial skin and skin structure infections (ABSSSI) were accepted for filing by the Food and Drug Administration (FDA) and were granted a Prescription Drug User Fee Act (PDUFA) date of June 19, 2017. Additionally, Melinta announced that the FDA does not plan to hold an Advisory Committee meeting for the NDAs. If approved, Ligand is entitled to receive a 2.5% royalty on net sales of the IV formulation of Baxdela and a $1.5 million approval milestone payment.
- Melinta Therapeutics announced signing a development and commercialization agreement with Menarini Group, granting Menarini exclusive rights to commercialize delafloxacin under its own brands in 68 countries in Europe, Asia-Pacific including China, South Korea and Australia (excluding Japan), and the Commonwealth of Independent States including Russia.
- Retrophin announced plans to initiate a single Phase 3 clinical trial to enable an NDA filing for sparsentan for the treatment of focal segmental glomerulosclerosis. The trial will include an interim analysis of proteinuria as a surrogate endpoint to serve as the basis for an NDA filing for Subpart H accelerated approval of sparsentan. Retrophin expects to initiate the trial in the second half of 2017.
- Sage Therapeutics presented brexanolone data at the American Academy of Neurology 2017 annual meeting.
- Aldeyra provided an update on its Phase 3 clinical program of ADX-102 in noninfectious anterior uveitis and anticipates beginning the Phase 3 trial in the second quarter of 2017.
- Aldeyra announced the last patient had completed dosing in Aldeyra's multicenter, double-blind, randomized Phase 2b clinical trial of ADX-102 in allergic conjunctivitis.
- Biocad announced receiving marketing authorization from the Ministry of Health of the Russian Federation for its interferon beta-1a biosimilar of Merck's Rebif®.
- Merck announced it stopped the Phase 2/3 EPOCH study evaluating verubecestat in people with mild-to-moderate Alzheimer's disease due to the conclusion that the efficacy endpoint could not be achieved. No safety concerns were noted. Results from EPOCH will be analyzed and presented at an upcoming scientific meeting. The external Data Monitoring Committee recommended that the ongoing Phase 3 APECS study, which is evaluating verubecestat in people with prodromal Alzheimer's disease, continue unchanged. Results from the APECS study are expected in February 2019.
- Novartis announced that it had exercised an option to in-license ECF843 (Lubricin) for ophthalmic indications from Lubris Biopharma. Ligand acquired economic rights to the Lubricin program from Selexis, SA in 2015.
- Opthea Limited announced positive results from its Phase 1/2a clinical trial of OPT-302 for wet age-related macular degeneration (wet AMD). Opthea is planning to initiate a Phase 2b trial in wet AMD and a Phase 2a trial in diabetic macular edema in the second half of 2017.
- Viking Therapeutics announced positive initial results from a proof-of-concept study of VK2809 in an *in vivo* model of glycogen storage disease 1a (GSD 1a) and announced funding of initial clinical development of VK2809 for treatment of GSD 1a with plans to file an investigational new drug (IND) application in the second half of 2017.
- Janssen filed an IND application for an antibody discovered using Ligand's OmniAb technology. The IND filing resulted in a $1 million milestone payment to Ligand. Janssen has a royalty-free license to the OmniAb technology (entered into with OMT in October of 2013), but will potentially pay Ligand further development and commercial milestones upon clinical success and regulatory approval of any therapeutic developed using the OmniAb technology.
- Marinus Pharmaceuticals presented Phase 1 clinical data showing the safety and tolerability of ganaxolone IV at the 6th London-Innsbruck Colloquium on Status Epilepticus and Acute Seizures.
- Merck KGaA announced it licensed rights to develop Captisol-enabled VX-970 from Vertex Pharmaceuticals. Economic terms of the original agreement between Ligand and Vertex remained unchanged.
- XTL Biopharmaceuticals announced the receipt of additional preclinical data regarding the role of hCDR1 as a potential treatment for Sjögren's syndrome from Prof. Edna Mozes of The Weizmann Institute of Science and the developer of hCDR1.

New Licensing Deals

- Ligand announced a worldwide platform license agreement with bluebird bio, Inc. Under the license, bluebird will be able to use the OmniRat®, OmniMouse® and OmniFlic® platforms to discover fully human mono- and bispecific antibodies and antibody fragments. Ligand is eligible to receive annual platform access payments, development milestone payments

and royalties for each product incorporating an OmniAb antibody. Bluebird will be responsible for all costs related to the programs. Ligand previously disclosed rights to a single-antibody partnership had been licensed to bluebird, but this new agreement gives bluebird full access to the OmniAb platform.

- Ligand announced an expansion of its license with Sermonix Pharmaceuticals to include worldwide rights to develop and commercialize oral lasofoxifene. Ligand originally licensed U.S. rights to oral lasofoxifene to Sermonix in February of 2015, and has now expanded the agreement to include the rest of the world. Ligand is entitled to commercial milestones and royalties on net sales ranging from 6-10% upon commercialization of oral lasofoxifene.
- Ligand announced a commercial license and supply agreement with Marinus Pharmaceuticals granting rights to use Captisol in the formulation of IV ganaxolone. Ligand is entitled to milestone payments, royalties and revenue from Captisol material sales related to IV ganaxolone.
- Ligand entered into a Captisol Clinical Use/Supply Agreement with Eisai.

Internal Glucagon Receptor Antagonist (GRA) Program

- Ligand announced the completion of enrollment in the Company's Phase 2 clinical trial with its novel, small-molecule GRA program (LGD-6972) for the treatment of type 2 diabetes mellitus. The Company expects to report topline results in September 2017.

Results of Operations

Revenue

(Dollars in thousands)	Q1 2017	Q1 2016	Change	% Change
Royalties	$ 24,230	$ 14,390	$ 9,840	68 %
Material sales	1,121	5,341	(4,220)	(79)%
License fees, milestones and other revenue	3,916	9,917	(6,001)	(61)%
Total revenue	$ 29,267	$ 29,648	$ (381)	(1)%

Total revenue decreased $0.4 million or 1% compared with Q1 2016. Royalty revenue increased primarily due to an increase in Promacta and Kyprolis royalties. Material sales decreased due to timing of customer purchases of Captisol for use in clinical trials and in commercialized products. License fees, milestones and other revenue decreased due to the receipt of a $6.0 million FDA approval milestone in the first quarter of 2016.

Operating Costs and Expenses

(Dollars in thousands)	Q1 2017	Q1 2016	Change
Costs of sales	$ 341	$ 955	$ (614)
Amortization of intangibles	2,715	2,524	191
Research and development	8,673	4,004	4,669
General and administrative	7,322	7,069	253
Total operating costs and expenses	$ 19,051	$ 14,552	$ 4,499

Total operating costs and expenses increased $4.5 million or 31% compared with Q1 2016. Cost of sales decreased due to lower material sales as a result of timing of customer purchases. Research and development expenses increased due to an increase in stock-based compensation expense, timing of internal development costs and an increase in headcount related expenses.

Other Income (Expense)

(Dollars in thousands)	Q1 2017	Q1 2016	Change
Interest expense, net	$ (2,941)	$ (3,005)	$ 64
Increase in contingent liabilities	(140)	(1,306)	1,166
Loss from Viking	(1,083)	(1,605)	522
Other income, net	141	391	(250)
Total other expense, net	$ (4,023)	$ (5,525)	$ 1,502

Interest expense consisted primarily of accretion of discount on our 2019 Convertible Senior Notes. Increase in contingent liabilities primarily relates to the settlement of certain CVRs associated with our CyDex acquisition. Loss from Viking is a result of the Company's ownership interest in Viking's operating results accounted for under the equity method. Other income, net consists primarily of short term investment transactions and the change in fair market value of Viking warrants.

Income Tax Expense

(Dollars in thousands)	Q1 2017	Q1 2016	Change
Income before income taxes	$ 6,193	$ 9,571	$ (3,378)
Income tax expense	(1,114)	(3,694)	2,580
Income from operations	$ 5,079	$ 5,877	$ (798)
Effective tax rate	18.0%	38.6%	

We compute our income tax provision for by applying the estimated annual effective tax rate to income or loss from recurring operations and adding the effects of any discrete income tax items specific to the period.

In Q1 2017, we adopted *ASU 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share Based Payment Accounting.* This new standard requires excess tax benefits recognized on stock-based compensation expense to be reflected in the statements of operations as a component of the provision for income taxes on a prospective basis. See Note 1 to the financial statements in Part I, Item 1 of this Quarterly Report for more information.

Our effective tax rate for the first quarter of fiscal 2017 was approximately 18%. Excluding discrete tax items primarily related to share-based compensation tax benefits resulting from the adoption of ASU 2016-09, our effective tax rate for the period was 37% and did not differ significantly from the federal statutory rate of 35%.

Liquidity and Capital Resources

We have financed our operations through offerings of our equity securities, issuance of convertible notes, product sales and the subsequent sales of our commercial assets, royalties, collaborative research and development and other revenue, and operating lease transactions.

We had net income of $5.1 million for the quarter ended March 31, 2017. As of March 31, 2017, our cash, cash equivalents and marketable securities totaled $159.4 million, and we had a working capital deficit of $52.3 million. We believe that our currently available funds, cash generated from operations as well as existing sources of and access to financing will be sufficient to fund our anticipated operating, capital requirements and debt service requirement. We expect to build cash in future months as we continue to generate significant cash flow from royalty, license and milestone revenue and Captisol material sales primarily driven by continued increases in Promacta and Kyprolis sales, recent product approvals and regulatory developments, as well as revenue from anticipated new licenses and milestones. In addition, we anticipate that our liquidity needs can be met

through other sources, including sales of marketable securities, borrowings through commercial paper and/or syndicated credit facilities and access to other domestic and foreign debt markets and equity markets.

While we believe in the viability of our strategy to generate sufficient operating cash flow and in our ability to raise additional funds, there can be no assurances to that effect.

Investments

We invest our excess cash principally in U.S. government debt securities, municipal debt securities, investment-grade corporate debt securities and certificates of deposit. We have established guidelines relative to diversification and maturities that maintain safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. Additionally, we own certain equity securities as a result of milestones and license fees received from licensees as well as warrants to purchase Viking common stock.

Borrowings and Other Liabilities

2019 Convertible Senior Notes

We have convertible debt outstanding as of March 31, 2017 related to our 2019 Convertible Senior Notes. In August 2014, we issued $245.0 million aggregate principal amount of convertible senior unsecured notes. The 2019 Convertible Senior Notes are convertible into common stock upon satisfaction of certain conditions. Interest of 0.75% per year is payable semi-annually on August 15th and February 15th through the maturity of the notes in August 2019.

Repurchases of Common Stock

In September 2015, our Board of Directors authorized us to repurchase up to $200.0 million of our common stock from time to time over a period of up to three years. We did not repurchase any shares of common stock during Q1 2017. As of March 31, 2017, $195.6 million remains available for repurchase under the authorized program.

Contingent Liabilities

Metabasis

In connection with the acquisition of Metabasis in January 2010, we entered into four CVR agreements with Metabasis shareholders. The CVRs entitle the holders to cash payments upon the sale or licensing of certain assets and upon the achievement of specified milestones. The fair value of the liability at March 31, 2017 was $1.5 million, and as of December 31, 2016 was $1.4 million.

Leases and Off-Balance Sheet Arrangements

We lease our office facilities under operating lease arrangements with varying terms through April 2023. The agreements provide for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases of 3.0%. We had no off-balance sheet arrangements at March 31, 2017 and December 31, 2016.

Cash Flows

(Dollars in thousands)	Q1 2017	Q1 2016	Change
Net cash provided by (used in):			
Operating activities	24,222	13,114	$ 11,108
Investing activities	(30,666)	(79,760)	49,094
Financing activities	(1,667)	511	(2,178)
Net decrease in cash and cash equivalents	$ (8,111)	$ (66,135)	$ (2,178)

During Q1 2017, we generated cash from operations and from issuance of common stock under employee stock plans. During the same period we used cash for investing activities, including payments to CVR holders and net purchases of short term investments. We also used cash to pay taxes related to net share settlement of equity awards.

During Q1 2016, we generated cash from operations and issuance of common stock under employee stock plans. During the same period we used cash for investing activities, including payments made to acquire OMT, payments to CVR holders, net purchases of short term investments and capital expenditures. We also used cash for repurchases of shares of our common stock under our stock repurchase programs.

Critical Accounting Policies

Certain of our policies require the application of management judgment in making estimates and assumptions that affect the amounts reported in our consolidated financial statements and the disclosures made in the accompanying notes. Those estimates and assumptions are based on historical experience and various other factors deemed applicable and reasonable under the circumstances. The use of judgment in determining such estimates and assumptions is by nature, subject to a degree of uncertainty. Accordingly, actual results could differ materially from the estimates made.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk from interest rates and equity prices which could affect our results of operations, financial condition and cash flows. We manage our exposure to these market risks through our regular operating and financing activities.

Investment Portfolio Risk

At March 31, 2017, our investment portfolio included investments in available-for-sale equity securities of $148.7 million. These securities are subject to market risk and may decline in value based on market conditions. Due to the short-term duration of our investment portfolio and low risk profile of our investments, a10% increase in interest rates would not have material effect on the fair value of our portfolio.

Equity Price Risk

Our 2019 Convertible Senior Notes include conversion and settlement provisions that are based on the price of our common stock at conversion or maturity of the notes, as applicable. The minimum amount of cash we may be required to pay is $245.0 million, but will ultimately be determined by the price of our common stock. The fair values of our 2019 Convertible Senior Notes are dependent on the price and volatility of our common stock and will generally increase or decrease as the market price of our common stock changes. In order to minimize the impact of potential dilution to our common stock upon the conversion of the 2019 Convertible Senior Notes, we entered into convertible bond hedges covering 3,264,643 shares of our common stock. Concurrently with entering into the convertible bond hedge transactions, we entered into warrant transactions whereby we sold warrants with an exercise price of approximately $125.08 per share, subject to adjustment. Throughout the term of the 2019 Convertible Senior Notes, the notes may have a dilutive effect on our earnings per share to the extent the stock price exceeds the conversion price of the notes. Additionally, the warrants may have a dilutive effect on our earnings per share to the extent the stock price exceeds the strike price of the warrants.

Foreign currency risk

Through our licensing and business operations, we are exposed to foreign currency risk. Foreign currency exposures arise from transactions denominated in a currency other than the functional currency and from foreign denominated revenues and profit translated into U.S. dollars. Our collaborative partners sell our products worldwide in currencies other than the U.S. dollar. Because of this, our revenues from royalty payments are subject to risk from changes in exchange rates.

We purchase Captisol from Hovione, located in Lisbon, Portugal. Payments to Hovione are denominated and paid in U.S. dollars, however the unit price of Captisol contains an adjustment factor which is based on the sharing of foreign currency risk between the two parties. The effect of an immediate 10% change in foreign exchange rates would not have a material impact on our financial condition, results of operations or cash flows. We do not currently hedge our exposures to foreign currency fluctuations.

Interest rate risk

We are exposed to market risk involving rising interest rates. To the extent interest rates rise, our interest costs could increase. An

increase in interest costs of 10% would not have a material impact on our financial condition, results of operations or cash flows.

ITEM 4. CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of 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. Based upon and as of the date of that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective to provide reasonable assurance that information required to be disclosed by us in reports we file or submit pursuant to the Exchange Act is (1) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (2) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. This conclusion was based on the unremediated material weakness in our internal control over financial reporting at March 31, 2017 as further described below.

As described in Item 9A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, we identified a material weakness in our internal control over financial reporting with respect to the design of our internal control over the tax accounting for complex transactions that have a significant tax impact, specifically, management did not have adequate supervision and review of certain technical tax accounting performed by third party tax specialists. We concluded that this material weakness was not remediated at December 31, 2016.

To remediate the material weakness described above and to prevent similar deficiencies in the future, we have been implementing additional controls and procedures including:

- engagement of additional independent third party tax experts to assist or review in the tax accounting for non-routine, complex transactions or provide any acceptable alternative practice on the same transaction
- additional training for staff involved in the tax accounting for non-routine, complex transactions

While we continue to strive to improve the respective process and controls over management supervision and review of certain technical tax accounting prepared by third parties, we do not believe the new controls have been functioning for sufficient time for management to conclude the material weakness has been remediated at March 31, 2017.

Our disclosure controls were designed to provide reasonable assurance that the controls and procedures would meet their objectives. Our management, including the Chief Executive Officer and Chief Financial Officer, cannot guarantee that our disclosure controls will prevent all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable assurance of achieving the designed control objectives and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusions of two or more people, or by management override of the control. Because of the inherent limitations in a cost-effective, maturing control system, misstatements due to error or fraud may occur and not be detected.

Except for the changes mentioned above, there have not been any changes in our internal control over financial reporting during the first quarter that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. Legal Proceedings

From time to time we are subject to various lawsuits and claims with respect to matters arising out of the normal course of our business. Due to the uncertainty of the ultimate outcome of these matters, the impact on future financial results is not subject to reasonable estimates.

Securities Litigation

In 2012, a federal securities class action and shareholder derivative lawsuit was filed in Pennsylvania alleging that the Company and its CEO assisted various breaches of fiduciary duties based on our purchase of a licensing interest in a development-stage pharmaceutical program from the Genaera Liquidating Trust in 2010 and our subsequent sale of half of our interest in the transaction to Biotechnology Value Fund, Inc. Plaintiff filed a second amended complaint in February 2015, which we moved to dismiss in March 2015. The district court granted the motion to dismiss on November 11, 2015. The plaintiff has appealed that ruling to the Third Circuit. The Company intends to continue to vigorously defend against the claims against the Company and its CEO. The outcome of the matter is not presently determinable.

Class Action Lawsuit

In November 2016, a putative shareholder class action lawsuit was filed in the United States District Court for the Southern District of California against the Company, its chief executive officer and chief financial officer. The complaint alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, and Rule 10b-5 promulgated thereunder, and seeks unspecified compensatory damages and other relief on behalf of a purported class of purchasers of the Company's securities between November 9, 2015 and November 14, 2016, inclusive. The complaint's allegations relate generally to the Company's November 2016 restatement of certain prior period financial statements. In March 2017, the Court appointed a lead plaintiff and lead counsel for lead plaintiff and the class. The lead plaintiff's amended complaint, or election to designate the previously filed complaint as the operative complaint, is due May 15, 2017, and the Company's response to the complaint is due thereafter. No trial date has been set. The Company believes that the lawsuit is without merit and intends to vigorously defend against the lawsuit.

ITEM 1A. RISK FACTORS

The following is a summary description of some of the many risks we face in our business. You should carefully review these risks in evaluating our business, including the businesses of our subsidiaries. You should also consider the other information described in this report. The risk factors set forth below with an asterisk (*) next to the title are new risk factors or risk factors containing material changes from the risk factors previously disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the SEC on February 26, 2016:

Future revenue based on Promacta, Kyprolis and Evomela, as well as sales of our other products, may be lower than expected.

Novartis is obligated to pay us royalties on its sales of Promacta, and we receive revenue from Amgen based on both sales of Kyprolis and purchases of Captisol material for clinical and commercial uses. These payments are expected to be a substantial portion of our ongoing revenues for some time. In addition, we receive revenues based on sales of Evomela and other products. Any setback that may occur with respect to any of our partners' products, and in particular Promacta or Kyprolis, could significantly impair our operating results and/or reduce our revenue and the market price of our stock. Setbacks for the products could include problems with shipping, distribution, manufacturing, product safety, marketing, government regulation or reimbursement, licenses and approvals, intellectual property rights, competition with existing or new products and physician or patient acceptance of the products, as well as higher than expected total rebates, returns, discounts, or unfavorable exchange rates. These products also are or may become subject to generic competition.

Future revenue from sales of Captisol material to our license partners may be lower than expected.

Revenues from sales of Captisol material to our collaborative partners represent a significant portion of our current revenues. Any setback that may occur with respect to Captisol could significantly impair our operating results and/or reduce the market price of our stock. Setbacks for Captisol could include problems with shipping, distribution, manufacturing, product safety, marketing, government regulation or reimbursement, licenses and approvals, intellectual property rights, competition with existing or new products and physician or patient acceptance of the products using Captisol.

If products or product candidates incorporating Captisol material were to cause any unexpected adverse events, the perception of Captisol safety could be seriously harmed. If this were to occur, we may not be able to sell Captisol unless and until we are able to demonstrate that the adverse event was unrelated to Captisol, which we may not be able to do. Further, the FDA could require us to submit additional information for regulatory review or approval, including data from extensive safety testing or clinical testing of products using Captisol. This would be expensive and it may delay the marketing of Captisol-enabled products and receipt of revenue related to those products, which could significantly impair our operating results and/or reduce the market price of our stock.

We obtain Captisol from a sole source supplier, and if this supplier were to cease to be able, for any reason, to supply Captisol to us in the amounts we require, or decline to supply Captisol to us, we would be required to seek an alternative source, which could potentially take a considerable length of time and impact our revenue and customer relationships. We maintain inventory of Captisol, which has a five year shelf life, at three geographically dispersed storage locations in the United States and Europe. If we were to encounter problems maintaining our inventory, such as natural disasters, at one or more of these locations, it could lead to supply interruptions.

We currently depend on our arrangements with our partners and licensees to sell products using our Captisol technology. These agreements generally provide that our partners may terminate the agreements at will. If our partners discontinue sales of products using Captisol, fail to obtain regulatory approval for products using Captisol, fail to satisfy their obligations under their agreements with us, or choose to utilize a generic form of Captisol should it become available, or if we are unable to establish new licensing and marketing relationships, our financial results and growth prospects would be materially affected. Furthermore, we maintain significant accounts receivable balances with certain customers purchasing Captisol materials, which may result in the concentration of credit risk. We generally do not require any collateral from our customers to secure payment of these accounts receivable. If any of our major customers were to default in the payment of their obligations to us, our business, operating results and cash flows could be adversely affected.

Further, under most of our Captisol outlicenses, the amount of royalties we receive will be reduced or will cease when the relevant patent expires. Our low-chloride patents and foreign equivalents are not expected to expire until 2033, our high purity patents and foreign equivalents, are not expected to expire until 2029 and our morphology patents and foreign

equivalents, are not expected to expire until 2025, but the initially filed patents relating to Captisol expired starting in 2010 in the United States and in 2016 in most countries outside the United States. If our other intellectual property rights are not sufficient to prevent a generic form of Captisol from coming to market and if in such case our partners choose to terminate their agreements with us, our Captisol revenue may decrease significantly.

Third party intellectual property may prevent us or our partners from developing our potential products; our and our partners' intellectual property may not prevent competition; and any intellectual property issues may be expensive and time consuming to resolve.

The manufacture, use or sale of our potential products or our licensees' products or potential products may infringe the patent rights of others. If others obtain patents with conflicting claims, we may be required to obtain licenses to those patents or to develop or obtain alternative technology. We may not be able to obtain any such licenses on acceptable terms, or at all. Any failure to obtain such licenses could delay or prevent us from pursuing the development or commercialization of our potential products.

Generally, our success will depend on our ability and the ability of our partners to obtain and maintain patents and other intellectual property rights for our and their potential products. Our patent position is uncertain and involves complex legal and technical questions for which legal principles are unresolved. Even if we or our partners do obtain patents, such patents may not adequately protect the technology we own or have licensed. For example, in January 2016, we received a paragraph IV certification from a subsidiary of Par advising us that it had filed an ANDA with the FDA seeking approval to market a generic version of Merck's NOXAFIL-IV product. The paragraph IV certification alleges that Merck's U.S. Patent No. 9,023,790 related to NOXAFIL-IV and our U.S. Patent No. 8,410,077 related to Captisol, which we refer to as the '077 Patent, are invalid and/or will not be infringed by Par's manufacture, use or sale of the product for which the ANDA was submitted. Although Merck and Par settled this dispute, we could face similar disputes in the future which, if successful, could result in lost revenues or limit our ability to enter into new licenses using the challenged patent.

Any conflicts with the patent rights of others could significantly reduce the coverage of our patents or limit our ability to obtain meaningful patent protection. For example, our European patent related to Agglomerated forms of Captisol was limited during an opposition proceeding, and the rejection of our European patent application related to High Purity Captisol is currently being appealed. In addition, any determination that our patent rights are invalid may result in early termination of our agreements with our license partners and could adversely affect our ability to enter into new license agreements. We also rely on unpatented trade secrets and know-how to protect and maintain our competitive position. We require our employees, consultants, licensees and others to sign confidentiality agreements when they begin their relationship with us. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our competitors may independently discover our trade secrets.

We may also need to initiate litigation, which could be time-consuming and expensive, to enforce our proprietary rights or to determine the scope and validity of others' rights. If this occurs, a court may find our patents or those of our licensors invalid or may find that we have infringed on a competitor's rights. In addition, if any of our competitors have filed patent applications in the United States which claim technology we also have invented, the United States Patent and Trademark Office may require us to participate in expensive interference proceedings to determine who has the right to a patent for the technology.

The occurrence of any of the foregoing problems could be time-consuming and expensive and could adversely affect our financial position, liquidity and results of operations.

We rely heavily on licensee relationships, and any disputes or litigation with our partners or termination or breach of any of the related agreements could reduce the financial resources available to us, including milestone payments and future royalty revenues.

Our existing collaborations may not continue or be successful, and we may be unable to enter into future collaborative arrangements to develop and commercialize our unpartnered assets. Generally, our current collaborative partners also have the right to terminate their collaborations at will or under specified circumstances. If any of our collaborative partners breach or terminate their agreements with us or otherwise fail to conduct their collaborative activities successfully (for example, by not making required payments when due, or at all), our product development under these agreements will be delayed or terminated. Disputes or litigation may also arise with our collaborators (with us and/or with one or more third parties), including those over ownership rights to intellectual property, know-how or technologies developed with our collaborators. For example, we are asserting our rights to receive payment against one of our collaborative partners which could harm our relationship with such

partner. Such disputes or litigation could adversely affect our rights to one or more of our product candidates and could delay, interrupt or terminate the collaborative research, development and commercialization of certain potential products, create uncertainty as to ownership rights of intellectual property, or could result in litigation or arbitration. In addition, a significant downturn or deterioration in the business or financial condition of our collaborators or partners could result in a loss of expected revenue and our expected returns on investment. The occurrence of any of these problems could be time-consuming and expensive and could adversely affect our business.

Our product candidates, and the product candidates of our partners, face significant development and regulatory hurdles prior to partnering and/or marketing which could delay or prevent licensing, sales-based royalties and/or milestone revenue.

Before we or our partners obtain the approvals necessary to sell any of our unpartnered assets or partnered programs, we must show through preclinical studies and human testing that each potential product is safe and effective. We and/or our partners have a number of partnered programs and unpartnered assets moving toward or currently awaiting regulatory action. Failure to show any product's safety and effectiveness could delay or prevent regulatory approval of a product and could adversely affect our business. The drug development and clinical trials process is complex and uncertain. For example, the results of preclinical studies and initial clinical trials may not necessarily predict the results from later large-scale clinical trials. In addition, clinical trials may not demonstrate a product's safety and effectiveness to the satisfaction of the regulatory authorities. A number of companies have suffered significant setbacks in advanced clinical trials or in seeking regulatory approvals, despite promising results in earlier trials. The FDA may also require additional clinical trials after regulatory approvals are received. Such additional trials may be expensive and time-consuming, and failure to successfully conduct those trials could jeopardize continued commercialization of a product.

The speed at which we and our partners complete our scientific studies and clinical trials depends on many factors, including, but not limited to, our ability to obtain adequate supplies of the products to be tested and patient enrollment. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial and other potential drug candidates being studied. Delays in patient enrollment for our or our partners' trials may result in increased costs and longer development times. In addition, our partners have rights to control product development and clinical programs for products developed under our collaborations. As a result, these partners may conduct these programs more slowly or in a different manner than expected. Moreover, even if clinical trials are completed, we or our partners still may not apply for FDA approval in a timely manner or the FDA still may not grant approval.

Our drug development programs may require substantial additional capital to complete successfully, arising from costs to: conduct research, preclinical testing and human studies; establish pilot scale and commercial scale manufacturing processes and facilities; and establish and develop quality control, regulatory, marketing, sales and administrative capabilities to support these programs. While we expect to fund our research and development activities from cash generated from operations to the extent possible, if we are unable to do so, we may need to complete additional equity or debt financings or seek other external means of financing. These financings could depress our stock price. If additional funds are required to support our operations and we are unable to obtain them on terms favorable to us, we may be required to cease or reduce further development or commercialization of our products, to sell some or all of our technology or assets or to merge with another entity.

Our OmniAb antibody platform faces specific risks, including the fact that no drug using antibodies from the platform has yet advanced to late stage clinical trials.

None of our collaboration partners using our OmniAb antibody platform have tested drugs based on the platform in late stage clinical trials and, therefore, none of our OmniAb collaboration partners' drugs have received FDA approval. If one of our OmniAb collaboration partners' drug candidates fails during preclinical studies or clinical trials, our other OmniAb collaboration partners may decide to abandon drugs using antibodies generated from the OmniAb platform, whether or not attributable to the platform. All of our OmniAb collaboration partners may terminate their programs at any time without penalty. In addition, our OmniRat and OmniFlic platforms, which we consider the most promising, are covered by two patents within the U.S. and two patents in the European Union and are subject to the same risks as our patent portfolio discussed above, including the risk that our patents may infringe on third party patent rights or that our patents may be invalidated. Further, we face significant competition from other companies selling human antibody-generating rodents, especially mice which compete with our OmniMouse platform, including the VelocImmune mouse, the AlivaMab mouse, the Trianni mouse and the Kymouse. Many of our competitors have greater financial, technical and human resources than we do and may be better equipped to develop, manufacture and market competing antibody platforms.

If plaintiffs bring product liability lawsuits against us or our partners, we or our partners may incur substantial liabilities and may be required to limit commercialization of our approved products and product candidates.

As is common in our industry, our partners and we face an inherent risk of product liability as a result of the clinical testing of our product candidates in clinical trials and face an even greater risk for commercialized products. Although we are not currently a party to product liability litigation, if we are sued, we may be held liable if any product or product candidate we develop causes injury or is found otherwise unsuitable during product testing, manufacturing, marketing or sale. Regardless of merit or eventual outcome, liability claims may result in decreased demand for any product candidates or products that we may develop, injury to our reputation, discontinuation of clinical trials, costs to defend litigation, substantial monetary awards to clinical trial participants or patients, loss of revenue and the inability to commercialize any products that we develop. We have product liability insurance that covers our clinical trials up to a $10.0 million annual limit. If we are sued for any injury caused by our product candidates or any future products, our liability could exceed our total assets.

Any difficulties from strategic acquisitions could adversely affect our stock price, operating results and results of operations.

We may acquire companies, businesses and products that complement or augment our existing business. We may not be able to integrate any acquired business successfully or operate any acquired business profitably. Integrating any newly acquired business could be expensive and time-consuming. Integration efforts often take a significant amount of time, place a significant strain on managerial, operational and financial resources and could prove to be more difficult or expensive than we predict. The diversion of our management's attention and any delay or difficulties encountered in connection with any future acquisitions we may consummate could result in the disruption of our on-going business or inconsistencies in standards and controls that could negatively affect our ability to maintain third-party relationships. Moreover, we may need to raise additional funds through public or private debt or equity financing, or issue additional shares, to acquire any businesses or products, which may result in dilution for stockholders or the incurrence of indebtedness.

As part of our efforts to acquire companies, business or product candidates or to enter into other significant transactions, we conduct business, legal and financial due diligence with the goal of identifying and evaluating material risks involved in the transaction. Despite our efforts, we ultimately may be unsuccessful in ascertaining or evaluating all such risks and, as a result, might not realize the intended advantages of the transaction. If we fail to realize the expected benefits from acquisitions we may consummate in the future or have consummated in the past, whether as a result of unidentified risks, integration difficulties, regulatory setbacks, litigation with current or former employees and other events, our business, results of operations and financial condition could be adversely affected. If we acquire product candidates, we will also need to make certain assumptions about, among other things, development costs, the likelihood of receiving regulatory approval and the market for such product candidates. Our assumptions may prove to be incorrect, which could cause us to fail to realize the anticipated benefits of these transactions.

In addition, we will likely experience significant charges to earnings in connection with our efforts, if any, to consummate acquisitions. For transactions that are ultimately not consummated, these charges may include fees and expenses for investment bankers, attorneys, accountants and other advisors in connection with our efforts. Even if our efforts are successful, we may incur, as part of a transaction, substantial charges for closure costs associated with elimination of duplicate operations and facilities and acquired IPR&D charges. In either case, the incurrence of these charges could adversely affect our results of operations for particular quarterly or annual periods.

We have restated prior consolidated financial statements, which may lead to possible additional risks and uncertainties, including possible loss of investor confidence.

We have restated our consolidated financial statements as of and for the year ended December 31, 2015 (including the third quarter within that year) and for the first and second quarters of fiscal year 2016 in order to correct certain accounting errors. For a description of the material weakness in our internal control over financial reporting identified by management in connection with the Restatement and management’s plan to remediate the material weakness, see “Part I, Item 4 - Controls and Procedures.” As a result of the Restatement, we have become subject to possible additional costs and risks, including (a) accounting and legal fees incurred in connection with the Restatement and (b) a possible loss of investor confidence. Further, we are subject to a shareholder lawsuit related to the Restatement which may be costly to defend and divert our management's attention from other operating matters. See "Part II, Item 1 - Legal Proceedings".

We have identified material weakness in our internal control over financial reporting that, if not remediated, could result in additional material misstatements in our financial statements.

As described in "Item 9A Controls and Procedures" of the Form 10-K filed with SEC on February 28, 2017, management concluded a control deficiency that represents a material weakness was not remediated at December 31, 2016. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. As a result of the unremediated material weaknesses, management has concluded that we did not maintain effective internal control over financial reporting as of December 31, 2016. Although management has since implemented new controls and process to remediate the material weakness, we do not believe these new controls have been in place for sufficient time for management to conclude the material weakness has been fully remediated at March 31, 2017. See "Part I, Item 4 - Controls and Procedures."

We continue to refine and implement our remediation plan to address the material weakness. If our remediation efforts are insufficient or if additional material weaknesses in our internal control over financial reporting are discovered or occur in the future, our consolidated financial statements may contain material misstatements and we could be required to restate our financial results, which could materially and adversely affect our business, results of operations and financial condition, restrict our ability to access the capital markets, require us to expend significant resources to correct the material weakness, subject us to fines, penalties or judgments, harm our reputation or otherwise cause a decline in investor confidence.

Changes or modifications in financial accounting standards, including those related to revenue recognition, may harm our results of operations.

From time to time, the Financial Accounting Standards Board, or FASB, either alone or jointly with other organizations, promulgates new accounting principles that could have an adverse impact on our results of operations. For example, in May 2014, FASB issued a new accounting standard for revenue recognition-Accounting Standards Codification Topic 606, Revenue from Contracts with Customers, or ASC 606-that supersedes most current revenue recognition guidance. The new guidance requires a company to recognize revenue upon transfer of goods or services to a customer at an amount that reflects the expected consideration to be received in exchange for those goods or services. The new guidance becomes effective in fiscal 2018 and early adoption in fiscal 2017 is permitted.

We anticipate this standard will have a material impact on our consolidated financial statements by accelerating the timing of revenue recognition for revenues related to royalties, and potentially certain contingent milestone based payments. Our practice has been to book royalties one quarter after our partners report sales of the underlying product. Now, under ASC 606, Ligand will estimate and book royalties in the same quarter that our partners report the sale of the underlying product. As a result, we will book royalties one quarter earlier compared to our past practice. We will rely on our partners' earning releases and other information from our partners to determine the sales of our partners' products and to estimate the related royalty revenues. If our partners report incorrect sales, or if our partners delay reporting of their earnings release, our royalty estimates may need to be revised and/or our financial reporting may be delayed.

Any difficulties in implementing this guidance could cause us to fail to meet our financial reporting obligations, which could result in regulatory discipline and harm investors' confidence in us. Finally, if we were to change our critical accounting estimates, including those related to the recognition of license revenue and other revenue sources, our operating results could be significantly affected.

Our ability to use our net operating loss carryforwards and certain other tax attributes to offset future taxable income may be subject to certain limitations.

As of December 31, 2016 we had U.S. federal and state net operating loss carryforwards (NOLs) of approximately $446.3 million and $140.5 million, respectively, which expire through 2036, if not utilized. As of December 31, 2016, we had federal and California research and development tax credit carryforwards of approximately $21.9 million and $19.4 million, respectively. The federal research and development tax credit carryforwards expire in various years through 2036, if not utilized. The California research and development credit will carry forward indefinitely. Under Sections 382 and 383 of Internal Revenue Code of 1986, as amended (Code) if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOLs and other pre-change tax attributes, such as research tax credits, to offset its future post-change income and taxes may be limited. In general, an "ownership change" occurs if there is a cumulative change in our ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. We believe we have experienced certain ownership changes in the past and have reduced our deferred tax assets related to NOLs and research and development tax credit carryforwards accordingly. In the event that it is determined that we have in the past experienced additional ownership changes, or if we experience one or more ownership changes as a result future transactions in our stock, then we may be further limited in our ability to use our NOLs and other tax assets to reduce taxes

owed on the net taxable income that we earn in the event that we attain profitability. Any such limitations on the ability to use our NOLs and other tax assets could adversely impact our business, financial condition and operating results.

We rely on information technology and any failure, inadequacy, interruption or security lapse of that technology, including any cyber security incidents, could harm our ability to operate our business effectively.

Our business is increasingly dependent on critical, complex and interdependent information technology systems, including internet-based systems, to support business processes as well as internal and external communications. Despite the implementation of security measures, our internal computer systems and those of our partners are vulnerable to damage from cyber-attacks, computer viruses, security breaches, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. System failures, accidents or security breaches could cause interruptions in our operations, could lead to the loss of trade secrets or other intellectual property, could lead to the public exposure of personal information of our employees and others, and could result in a material disruption of our clinical and commercialization activities and business operations, in addition to possibly requiring substantial expenditures to remedy. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and our business and financial condition could be harmed.

The occurrence of a catastrophic disaster could damage our facilities beyond insurance limits or we could lose key data which could cause us to curtail or cease operations.

We are vulnerable to damage and/or loss of vital data from natural disasters, such as earthquakes, tornadoes, power loss, fire, floods and similar events, as well as from accidental loss or destruction. If any disaster were to occur, our ability to operate our business could be seriously impaired. We have property, liability, and business interruption insurance which may not be adequate to cover our losses resulting from disasters or other similar significant business interruptions, and we do not plan to purchase additional insurance to cover such losses due to the cost of obtaining such coverage. Any significant losses that are not recoverable under our insurance policies could seriously impair our business, financial condition and prospects.

We sold the 2019 Convertible Senior Notes, which may impact our financial results, result in the dilution of existing stockholders, and restrict our ability to take advantage of future opportunities.

In August of 2014, we sold $245.0 million aggregate principal amount of 0.75% Convertible Senior Notes due 2019, or the 2019 Convertible Senior Notes. We will be required to pay interest on the 2019 Convertible Senior Notes until they come due or are converted, and the payment of that interest will reduce our net income. The sale of the 2019 Convertible Senior Notes may also affect our earnings per share figures, as accounting procedures require that we include in our calculation of earnings per share the number of shares of our common stock into which the 2019 Convertible Senior Notes are convertible. The 2019 Convertible Senior Notes may be converted, under the conditions and at the premium specified in the 2019 Convertible Senior Notes, into cash and shares of our common stock, if any (subject to our right to pay cash in lieu of all or a portion of such shares). If shares of our common stock are issued to the holders of the 2019 Convertible Senior Notes upon conversion, there will be dilution to our shareholders equity. Upon the occurrence of certain circumstances, holders of the 2019 Convertible Senior Notes may require us to purchase all or a portion of their notes for cash, which may require the use of a substantial amount of cash. If such cash is not available, we may be required to sell other assets or enter into alternate financing arrangements at terms that may or may not be desirable. The existence of the 2019 Convertible Senior Notes and the obligations that we incurred by issuing them may restrict our ability to take advantage of certain future opportunities, such as engaging in future debt or equity financing activities.

Impairment charges pertaining to goodwill, identifiable intangible assets or other long-lived assets from our mergers and acquisitions could have an adverse impact on our results of operations and the market value of our common stock.

The total purchase price pertaining to our acquisitions in recent years of CyDex, Metabasis, Pharmacopeia, Neurogen and OMT have been allocated to net tangible assets, identifiable intangible assets, in-process research and development and goodwill. To the extent the value of goodwill or identifiable intangible assets or other long-lived assets become impaired, we will be required to incur material charges relating to the impairment. Any impairment charges could have a material adverse impact on our results of operations and the market value of our common stock.

Our charter documents and concentration of ownership may hinder or prevent change of control transactions.

Provisions contained in our certificate of incorporation and bylaws may discourage transactions involving an actual or potential change in our ownership. In addition, our Board of Directors may issue shares of common or preferred stock without

any further action by the stockholders. Our directors and certain of our institutional investors collectively beneficially own a significant portion of our outstanding common stock. Such provisions and issuances may have the effect of delaying or preventing a change in our ownership. If changes in our ownership are discouraged, delayed or prevented, it would be more difficult for our current Board of Directors to be removed and replaced, even if you or our other stockholders believe that such actions are in the best interests of us and our stockholders.

We may be subject to prosecution for violation of federal law due to our agreement with Vireo Health, which is developing drugs using cannabis.

In November 2015, we entered into a license agreement and supply agreement with Vireo Health granting Vireo Health an exclusive right in certain states within the United States and certain global territories to use Captisol in Vireo's development and commercialization of pharmaceutical-grade cannabinoid-based products. However, state laws legalizing medical cannabis use are in conflict with the Federal Controlled Substances Act, which classifies cannabis as a schedule-I controlled substance and makes cannabis use and possession illegal on a national level. The United States Supreme Court has ruled that it is the Federal government that has the right to regulate and criminalize cannabis, even for medical purposes, and thus Federal law criminalizing the use of cannabis preempts state laws that legalize its use. While the Obama administration effectively stated that it is not an efficient use of resources to direct Federal law enforcement agencies to prosecute those lawfully abiding by state-designated laws allowing the use and distribution of medical and recreational cannabis, the Trump administration has indicated that it will reconsider such policy and practice, especially with respect to recreational cannabis. Further, even if the Trump administration affirms the same approach with respect to medical or recreational cannabis initially, there is no guarantee that such policy and practice will not change regarding the low-priority enforcement of Federal laws in states where cannabis has been legalized. Any such change in the Federal government's enforcement of Federal laws could result in Ligand, as the supplier of Captisol, to be charged with violations of Federal laws which may result in significant legal expenses and substantial penalties and fines.

Our stock price has been volatile and could experience a sudden decline in value.

The market prices for securities of biotechnology and pharmaceutical companies have historically been highly volatile, and the market has recently experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. Continued volatility in the overall capital markets could reduce the market price of our common stock in spite of our operating performance. Further, high stock price volatility could result in higher stock-based compensation expense.

Our common stock has experienced significant price and volume fluctuations and may continue to experience volatility in the future. Many factors may have a significant impact on the market price of our common stock, including, but not limited to, the following factors: results of or delays in our preclinical studies and clinical trials; the success of our collaboration agreements; publicity regarding actual or potential medical results relating to products under development by us or others; announcements of technological innovations or new commercial products by us or others; developments in patent or other proprietary rights by us or others; comments or opinions by securities analysts or major stockholders; future sales of our common stock by existing stockholders; regulatory developments or changes in regulatory guidance; litigation or threats of litigation; economic and other external factors or other disaster or crises; the departure of any of our officers, directors or key employees; period-to-period fluctuations in financial results; and price and volume fluctuations in the overall stock market.

Our results of operations and liquidity needs could be materially negatively affected by market fluctuations and economic downturn.

Our results of operations could be materially negatively affected by economic conditions generally, both in the United States and elsewhere around the world. Continuing concerns over inflation, energy costs, geopolitical issues, the availability and cost of credit, and the U.S. financial markets have contributed to increased volatility and diminished expectations for the economy and the markets going forward. Domestic and international equity markets periodically experience heightened volatility and turmoil. These events may have an adverse effect on us. In the event of a market downturn, our results of operations could be adversely affected by those factors in many ways, including making it more difficult for us to raise funds if necessary, and our stock price may further decline. We cannot provide assurance that our investments are not subject to adverse changes in market value. If our investments experience adverse changes in market value, we may have less capital to fund our operations.

ITEM 5. Other Information

Third Amendment to Loan and Security Agreement

On May 8, 2017, we entered into a Third Amendment to Loan and Security Agreement (the "Loan Amendment") with Viking, which amends that certain Loan and Security Agreement, dated as of May 21, 2014, by and between us and Viking, as amended on April 8, 2015 and January 22, 2016 (the "Original Viking Loan Agreement"). Pursuant to the terms of the Original Viking Loan Agreement, the Company provided Viking with loans in an aggregate amount of $2.5 million, which are evidenced by a Secured Convertible Promissory Note issued by Viking to us (the "Viking Note"). The Loan Amendment amends the Original Viking Loan Agreement (as so amended by the Loan Amendment, the "Amended Loan Agreement") to, among other things, (i) extend the maturity date of the loans under the Viking Note from May 21, 2017 to May 21, 2018 (the "Maturity Date") and (ii) cause Viking to pay to us, no later than July 15, 2017, a cash amount of $200,000, which payment shall reduce first the accrued and unpaid interest and second the unpaid principal amount on the Viking Note by $0.50 for each $1.00 of value.

The foregoing description of certain terms contained in the Loan Amendment does not purport to be complete and is qualified in its entirety by reference to a copy of the Loan Amendment which we have filed with this Quarterly Report on Form 10-Q as Exhibit 10.1

ITEM 6. EXHIBITS

The Exhibit Index to this Quarterly Report on Form 10-Q is incorporated herein by reference.

SIGNATURES

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

Date: May 9, 2017

By: /s/ Matthew Korenberg
Matthew Korenberg
Vice President, Finance and Chief Financial Officer
Duly Authorized Officer and Principal Financial Officer

EXHIBIT INDEX

Exhibit Number	Description
10.1	Third Amendment to Loan and Security Agreement with Viking
31.1	Certification by Principal Executive Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by Principal Financial Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certifications by Principal Executive Officer and Principal Financial Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

Exhibit 10.1

Third Amendment to Loan and Security Agreement

This Third Amendment to Loan and Security Agreement , dated as of May 8, 2017 (this " **Amendment**"), made by and between **Viking Therapeutics, Inc.**, a Delaware corporation ("**Borrower**"), and **Ligand Pharmaceuticals Incorporated**, a Delaware corporation ("**Lender**"), amends the terms of the Loan and Security Agreement, dated May 21, 2014, as amended on April 8, 2015 and January 22, 2016, by and between Borrower and Lender (the "**Agreement**") pursuant to Section 25(c) of the Agreement as follows:

1. Definition of Maturity Date. The definition of "Maturity Date" in Schedule A to the Agreement is amended and restated to read in its entirety as follows:

""**Maturity Date**" means May 21, 2018."

2. Required Prepayment. A new Section 2(e)(iii) shall be added to the Agreement as follows:

"(iii) Required Repayment. No later than July 15, 2017, Borrower shall repay to Lender $200,000, which payment shall be comprised solely of cash (the "**Required Repayment**"). The Required Repayment shall be applied, first, to accrued and unpaid interest on the Loan and, second, to the unpaid principal amount of the Loan. Each $1.00 of value of the Required Repayment shall reduce the amount of accrued and unpaid interest and then unpaid principal amount on the Loan by $0.50."

3. Addresses for Notices. Section 22 of the Agreement shall be amended as follows:

(a) The reference to "11119 North Torrey Pines Road, Suite 50, San Diego, CA 92037" shall be amended and restated in its entirety to read "12340 El Camino Real, Suite 250, San Diego, CA 92130"

(b) The reference to "11119 North Torrey Pines Road, Suite 200, San Diego, CA 92037" shall be amended and restated in its entirety to read "3911 Sorrento Valley Blvd, Suite 110, San Diego, CA 92121".

4. All of the other provisions of the Agreement shall remain in full force and effect.

5. This Amendment may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original, and all of which taken together shall constitute one and the same agreement. In the event that any signature is delivered by facsimile, a portable document format (PDF) or similar electronic format, such signature shall create a valid binding obligation of the party executing (or on whose behalf such signature is executed) the same with the same force and effect as if such facsimile, PDF or other electronic format signature were the original thereof.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Third Amendment to Loan and Security Agreement to be duly executed on the day and year first above written.

BORROWER:

Viking Therapeutics, Inc.

By: /s/ Brian Lian
Name: Brian Lian, Ph.D.
Title: President and Chief Executive Officer

LENDER:

Ligand Pharmaceuticals Incorporated

By: /s/ Matthew Korenberg
Name: Matthew Korenberg
Title: Vice President, Finance and Chief Financial Officer

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John L. Higgins, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;

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

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

4. The registrant's other certifying officer 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 9, 2017

/s/ John L. Higgins

John L. Higgins
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew Korenberg, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;

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

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

4. The registrant's other certifying officer 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 9, 2017

/s/ Matthew Korenberg

Matthew Korenberg
Vice President, Finance and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended March 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John L. Higgins, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

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

Date: May 9, 2017

/s/ John L. Higgins

John L. Higgins
Chief Executive Officer
(Principal Executive Officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended March 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Matthew Korenberg, Vice President, Finance and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

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

Date: May 9, 2017

/s/ Matthew Korenberg

Matthew Korenberg
Vice President, Finance and Chief Financial Officer
(Principal Financial Officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.