

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

**FORM 10-Q/A
Amendment No. 1**

Quarterly Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934
For the quarterly period ended March 31, 2016

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
(State or other jurisdiction of
incorporation or organization)

77-0160744
(I.R.S. Employer
Identification No.)

3911 Sorrento Valley Boulevard, Suite 110
San Diego, CA
(Address of principal executive offices)

92121
(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, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one)

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-Accelerated Filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller Reporting Company	<input type="checkbox"/>

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

Table of Contents

As of November 1, 2016, the registrant had 20,900,189 shares of common stock outstanding.

EXPLANATORY NOTE

Ligand Pharmaceuticals Incorporated (“the Company”) is filing this Amendment on Form 10-Q/A (“Amended Form 10-Q”) to its Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (the “Original Form 10-Q”), which was originally filed with the Securities and Exchange Commission (“SEC”) on May 9, 2016 (the “Original Filing Date”), to restate the Company’s consolidated financial statements for the quarter ended March 31, 2016.

The Company is filing this Amended Form 10-Q to amend Item 1 (Financial Statements), Item 1A (Risk Factors), Item 4 (Controls and Procedures) of Part I and Item 6 (Exhibits) of Part II to correct errors relating to the Company’s net operating loss (NOL) carryforward benefits in the United States which resulted in an overstatement of deferred tax assets (DTA) at March 31, 2016 and December 31, 2015. In connection with three acquisitions that were completed prior to February 2010, the Company recognized DTAs for a portion of the NOLs, which included capitalized research and development expenses, obtained from the acquired businesses. From the time of the acquisitions until September 2015, there was a full valuation allowance against all of the Company’s NOLs, including those obtained from the entities acquired. In September 2015, the Company concluded that it was more likely than not that a substantial portion of its deferred tax assets would be realized through future taxable income. As a result, the Company released the majority of its DTA valuation allowance, including \$27.5 million related to NOLs recognized as part of the businesses acquired prior to February of 2010.

During the quarter ended September 30, 2016, the Company concluded that for accounting purposes the approximately \$27.5 million of DTAs that were obtained upon acquiring the businesses prior to February of 2010 did not meet the more likely-than-not criterion for recognition in 2015 and that the related valuation allowance should not have been reversed. In reviewing its prior-year accounting as part of the 2016 third quarter close process, the Company re-evaluated its accounting for income taxes with the assistance of additional third-party tax professionals and determined that the Company’s income tax benefit and net income for the year ended December 31, 2015 were overstated by \$27.5 million each as were the Company’s DTAs at March 31, 2016.

The Company also recorded adjustments to the consolidated financial statements as part of this restatement relating to the classification of our 2019 Convertible Senior Notes. As of December 31, 2015, the Company’s last reported sale price exceeded the 130% threshold described in Note 6 - “Financing Arrangements” and accordingly the 2019 Convertible Senior Notes of \$202.0 million should have been reclassified as a current liability as of December 31, 2015. As a result, the related unamortized discount of \$39.6 million previously classified within stockholder’s equity was reclassified as temporary equity component of currently redeemable convertible notes on our Consolidated Balance Sheet.

The following adjustments have been made to the March 31, 2016 and December 31, 2015 amounts that were included in the Original Form 10-Q and are reflected in the balances included in this Amended Form 10-Q herein:

- Decrease in deferred tax assets by \$27.5 million as of June 30 2016 and December 31, 2015
- Increase in accumulated deficit by \$27.5 million as of June 30, 2016 and December 31, 2015
- Increase to current 2019 convertible senior notes, net and decrease to non-current 2019 convertible senior notes, net by \$202.0 million as of December 31, 2015
- Increase to temporary equity component of currently redeemable convertible notes and a decrease to additional paid-in capital by \$39.6 million as of December 31, 2015

The above mentioned errors and adjustments had no impact on the Company’s results of operations or cash flows for the three-months ended March 31, 2016.

This Amended Form 10-Q has not modified or updated the information in the Original Form 10-Q, except as necessary to reflect the effects of the restatement, which took into consideration subsequent information about conditions that existed at March 31, 2016. This Amended Form 10-Q continues to speak as of the dates described herein, and the disclosures contained in the Original Form 10-Q do not reflect any events that occurred subsequent to the Original Filing Date.

Information not affected by the restatement is unchanged and reflects the disclosures made as of the Original Filing Date. In particular, forward-looking statements included in this Amended Form 10-Q that have not been affected by the restatement represent management’s views as of the Original Filing Date. Such forward-looking statements should not be assumed to be accurate as of any future date. Accordingly, this Amended Form 10-Q should be read in conjunction with our subsequent filings with the SEC, as information in such filings may update or supersede certain information contained in this Amended Form 10-Q.

LIGAND PHARMACEUTICALS INCORPORATED
QUARTERLY REPORT

FORM 10-Q

TABLE OF CONTENTS

PART I. FINANCIAL INFORMATION

<u>ITEM 1. Financial Statements</u>	<u>4</u>
Condensed Consolidated Balance Sheets as of March 31, 2016 (restated) and December 31, 2015 (Unaudited)	<u>4</u>
<u>Condensed Consolidated Statements of Operations for the three months ended March 31, 2016 and 2015 (Unaudited)</u>	<u>5</u>
<u>Condensed Consolidated Statements of Comprehensive Income for the three months ended March 31, 2016 and 2015 (Unaudited)</u>	<u>7</u>
<u>Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2016 and 2015 (Unaudited)</u>	<u>8</u>
<u>Notes to Condensed Consolidated Financial Statements (Unaudited)</u>	<u>9</u>
<u>ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>19</u>
<u>ITEM 3. Quantitative and Qualitative Disclosures about Market Risk</u>	<u>25</u>
<u>ITEM 4. Controls and Procedures</u>	<u>26</u>

PART II. OTHER INFORMATION

<u>ITEM 1. Legal Proceedings</u>	<u>28</u>
<u>ITEM 1A. Risk Factors</u>	<u>29</u>
<u>ITEM 6. Exhibits</u>	<u>36</u>
<u>SIGNATURE</u>	<u>37</u>

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.
AOCI	Accumulated Other Comprehensive Income
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
Eisai	Eisai Incorporated
EMA	European Medicines Agency
FASB	Financial Accounting Standards Board
FDA	Food and Drug Administration
FSGS	Focal segmental glomerulosclerosis
GAAP	Generally accepted accounting principles in the United States
IPO	Initial public offering
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 Pharmaceutical, Inc.
Pfizer	Pfizer Inc.
Retrophin	Retrophin Inc.
SEC	Securities and Exchange Commission
Selexis	Selexis, SA
TPE	Third-party evidence
VIE	Variable interest entity
Viking	Viking Therapeutics
Viking IPO	Viking's initial public offering
VSOE	Vendor-specific objective evidence

Table of Contents

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

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

	March 31, 2016 (unaudited) (restated)	December 31, 2015 (a) (restated)
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 31,293	\$ 97,428
Short-term investments	81,908	102,791
Accounts receivable	11,779	6,170
Note receivable from Viking Therapeutics	4,767	4,782
Inventory	1,750	1,633
Other current assets	1,562	1,908
Total current assets	133,059	214,712
Deferred income taxes	129,777	189,083
Investment in Viking Therapeutics	28,118	29,728
Intangible assets, net	212,823	48,347
Goodwill	72,997	12,238
Commercial license rights	8,546	8,554
Property and equipment, net	567	372
Other assets	70	27
Total assets	\$ 585,957	\$ 503,061
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,688	\$ 4,083
Accrued liabilities	3,669	5,397
Current contingent liabilities	5,285	10,414
Current lease exit obligations	577	934
2019 convertible senior notes, net	—	201,985
Other current liabilities	21	8
Total current liabilities	12,240	222,821
Long-term debt, net	204,653	—
Long-term contingent liabilities	4,022	3,033
Other long-term liabilities	446	297
Total liabilities	221,361	226,151
Commitments and Contingencies		
Equity component of currently redeemable convertible notes (Note 6)	—	39,628
Stockholders' equity:		
Common stock, \$0.001 par value; 33,333,333 shares authorized; 20,815,636 and 19,949,012 shares issued and outstanding at March 31, 2016 and December 31, 2015, respectively	21	20
Additional paid-in capital	783,890	661,850
Accumulated other comprehensive income	3,568	4,903
Accumulated deficit	(422,883)	(429,491)
Total stockholders' equity attributable to Ligand Pharmaceuticals	364,596	237,282
Total liabilities and stockholders' equity	\$ 585,957	\$ 503,061

(a) See restatement discussion in footnote 1

See accompanying notes.

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

	Three months ended	
	March 31,	
	2016	2015
Revenues:		
Royalties	\$ 14,390	\$ 10,287
Material sales	5,341	3,729
License fees, milestones and other revenues	9,917	586
Total revenues	29,648	14,602
Operating costs and expenses:		
Cost of sales ⁽¹⁾	955	1,074
Amortization of intangibles	2,524	594
Research and development	4,004	3,368
General and administrative	6,825	5,994
Lease exit and termination costs	244	223
Total operating costs and expenses	14,552	11,253
Income from operations	15,096	3,349
Other (expense) income:		
Interest expense, net	(3,005)	(2,973)
Increase in contingent liabilities	(1,306)	(3)
Equity in net losses from Viking Therapeutics	(1,605)	—
Other, net	391	(447)
Total other (expense) income, net	(5,525)	(3,423)
Income (loss) before income taxes	9,571	(74)
Income tax expense	(3,694)	(15)
Income (loss) from operations	5,877	(89)
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 (loss) including noncontrolling interests:	6,608	(89)
Less: Net loss attributable to noncontrolling interests	—	(843)
Net income	\$ 6,608	\$ 754
Per share amounts attributable to Ligand common shareholders:		
Basic earnings per share data		
Income from continuing operations	\$ 0.28	\$ 0.04
Income from discontinued operations	0.04	—
Net income	\$ 0.32	\$ 0.04
Diluted earnings per share data⁽²⁾		
Income from continuing operations	\$ 0.26	\$ 0.04
Income from discontinued operations	0.03	—
Net income	\$ 0.30	\$ 0.04
Shares used for computation (in thousands)		
Basic	20,708	19,612
Diluted	22,284	20,631

(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 (LOSS)
(Unaudited)
(in thousands)

	Three months ended	
	March 31,	
	2016	2015
Net income:	\$ 6,608	\$ 754
Unrealized net (loss) gain on available-for-sale securities, net of tax	(1,098)	4,614
Less: Reclassification of net realized (gains) losses included in net income, net of tax	(236)	(234)
Comprehensive income (loss)	<u>\$ 5,274</u>	<u>\$ 5,134</u>

See accompanying notes.

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

	Three months ended	
	March 31,	
	2016	2015
Operating activities		
Net income (loss) including noncontrolling interests	\$ 6,608	\$ (89)
Less: gain from discontinued operations	731	—
Income (loss) from continuing operations	5,877	(89)
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:		
Non-cash change in estimated fair value of contingent liabilities	1,306	3
Realized (gain) loss on sale of short-term investment	(406)	447
Depreciation and amortization	2,575	650
Amortization of discount on investments, net	320	—
Amortization of debt discount and issuance fees	2,668	2,509
Stock-based compensation	4,118	2,914
Deferred income taxes	4,101	6
Accretion of note payable	—	14
Change in fair value of the convertible debt receivable from Viking	15	—
Loss on equity investment in Viking Therapeutics, Inc.	1,605	—
Other	—	(1)
Changes in operating assets and liabilities:		
Accounts receivable	(5,604)	5,211
Inventory	853	(150)
Other current assets	16	445
Other long-term assets	(41)	(291)
Accounts payable and accrued liabilities	(4,302)	(4,667)
Restricted investments	—	661
Deferred revenue	13	(83)
Net cash provided by operating activities	13,114	7,579
Investing activities		
Payments to CVR holders and other contingency payments	(5,446)	(3,247)
Purchases of property and equipment	(238)	(10)
Cash paid for acquisition, net of cash acquired	(92,855)	—
Purchase of short-term investments	(49,892)	—
Proceeds from sale of property and equipment	—	1
Proceeds from sale of short-term investments	20,270	459
Proceeds from maturity of short-term investments	48,401	—
Net cash used in investing activities	(79,760)	(2,797)
Financing activities		
Net proceeds from stock option exercises and ESPP	1,013	781
Purchase of common stock for RSU vesting	(502)	—
Net cash provided by financing activities	511	781
Net (decrease) increase in cash and cash equivalents	(66,135)	5,563
Cash and cash equivalents at beginning of period	97,428	160,203
Cash and cash equivalents at end of period	\$ 31,293	\$ 165,766
Supplemental disclosure of cash flow information		
Interest paid	\$ 919	\$ 903
Taxes paid	1	11
Supplemental schedule of non-cash activity		
Stock issued for acquisition, net of issuance cost	(77,615)	—
Accrued inventory purchases	600	2,402
Unrealized gain (loss) on AFS investments	(1,834)	4,614

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

1. Significant Accounting Principles

Business

Ligand is a biopharmaceutical company with a business model that is based upon the concept of developing or acquiring royalty revenue generating assets and coupling them with a lean corporate cost structure. We operate in one business segment: development and licensing biopharmaceutical assets.

Principles of Consolidation

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

Basis of Presentation

The Company's accompanying unaudited condensed consolidated financial statements as of March 31, 2016 and for the three months ended March 31, 2016 and 2015 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. Operating results for the three months ended March 31, 2016 are not necessarily indicative of the results that may be expected for the year ending December 31, 2016. 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/A for the year ended December 31, 2015 filed on November 14, 2016.

Restatement

The Company has restated its financial statements for the year ended December 31, 2015 to correct errors relating to the Company's net operating loss (NOL) carryforward benefits in the United States which resulted in an overstatement of deferred tax assets (DTA) at December 31, 2015 and March 31, 2016. In connection with three acquisitions that were completed prior to February 2010, the Company recognized DTAs for a portion of the NOLs, which included capitalized research and development expenses, obtained from the acquired businesses. From the time of the acquisitions until September 2015, there was a valuation allowance against all of the Company's NOLs, including those obtained from the entities acquired. In September 2015, the Company concluded that it was more likely than not that a substantial portion of its deferred tax assets would be realized through future taxable income. As a result, the Company released the majority of its DTA valuation allowance in full, including \$27.5 million related to NOLs recognized as part of the businesses acquired prior to February of 2010.

During the quarter ended September 30, 2016, the Company concluded that for accounting purposes the approximately \$27.5 million of DTAs that were obtained upon acquiring the businesses prior to February of 2010 did not meet the more likely-than-not criterion for recognition in 2015 and that the related valuation allowance should not have been reversed. As a result, the Company's income tax benefit and net income for the year ended December 31, 2015 were overstated by \$27.5 million each as were the Company's DTAs at March 31, 2016.

Based on the materiality guidelines contained in SEC Staff Accounting Bulletin No. 99, Materiality, and SEC Staff Accounting Bulletin No. 108, Considering the Effects of Prior Year Misstatements in Current Year Financial Statements, the Company believes that the income tax adjustment is material to its financial statements for periods subsequent to and including the year ended December 31, 2015. Accordingly, the Company determined that it would restate prior period financial statements and amend its previously filed affected filings, including its March 31, 2016 report on Form 10-Q and December 31, 2015 report on Form 10-K.

The Company also recorded adjustments as part of this restatement related to the classification of our 2019 Convertible Senior Notes. As of December 31, 2015, the Company's last reported sale price exceeded the 130% threshold described in Note 6 - "Financing Arrangements" and accordingly the 2019 Convertible Senior Notes have been reclassified as a current liability as of December 31, 2015. As a result, the related unamortized discount of \$39.6 million previously classified within stockholder's equity was reclassified as temporary equity component of currently redeemable convertible notes on our Condensed Consolidated Balance Sheet.

The effects of these prior period corrections are as follows:

	As of December 31, 2015		
	As Reported	Adjustments	As Restated
Deferred income taxes	\$ 216,564	\$ (27,481)	\$ 189,083
Total assets ⁽¹⁾	530,542	(27,481)	503,061
2019 convertible senior notes, net - current	—	201,985	201,985
Total current liabilities	20,836	201,985	222,821
2019 convertible senior notes, net - long term ⁽¹⁾	201,985	(201,985)	—
Equity component of currently redeemable convertible notes (Note 5)	—	39,628	39,628

Additional paid-in capital	701,478	(39,628)	661,850
Accumulated deficit	(402,010)	(27,481)	(429,491)
Total stockholders' equity	304,391	(67,109)	237,282
Total liabilities and stockholders' equity ⁽¹⁾	530,542	(27,481)	503,061

(1) \$3.4 million of unamortized issuance cost was reclassified to debt discount in the concurrently filed 2015 10-K/A form that it is filed after the Company's retrospective adoption of ASU 2015-03, *Interest-Imputation of Interest: Simplifying the Presentation of Debt Issuance Costs* in Q1 2016.

	As of March 31, 2016		
	As Reported	Adjustments	As Restated
Deferred income taxes	\$ 157,258	(27,481)	\$ 129,777
Total assets	613,438	(27,481)	585,957
Accumulated deficit	(395,402)	(27,481)	(422,883)
Total stockholders' equity	392,077	(27,481)	364,596
Total liabilities and stockholders' equity	613,438	(27,481)	585,957

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.

Reclassifications

Certain reclassifications have been made to the previously issued balance sheet and statement of operations for the three months ended March 31, 2015 for comparability purposes. These reclassifications had no effect on the reported net income, stockholders' equity, and operating cash flows as previously reported.

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 by dividing net income by the weighted-average number of common shares and common stock equivalents of all dilutive securities calculated using the treasury stock method and the if-converted method. The total number of potentially dilutive securities including stock options and warrants excluded from the computation of diluted income per share because their inclusion would have been anti-dilutive was 3.5 million and 4.5 million, as of March 31, 2016 and 2015, respectively.

The following table presents the computation of basic and diluted net income per share for the periods indicated (in thousands, except per share amounts):

	Three months ended	
	March 31,	
	2016	2015
Net income from continuing operations	\$ 5,877	\$ 754
Net income from discontinued operations	731	—
Net income	\$ 6,608	\$ 754
Shares used to compute basic income per share	20,707,926	19,611,881
Dilutive potential common shares:		
Restricted stock	66,736	61,538
Stock options	759,581	957,369
0.75% Convertible Senior Notes, Due 2019	749,736	—
Shares used to compute diluted income per share	22,283,979	20,630,788
Basic per share amounts:		
Income from continuing operations	\$ 0.28	\$ 0.04
Income from discontinued operations	0.04	—
Basic net income per share	\$ 0.32	\$ 0.04
Diluted per share amounts:		
Income from continuing operations	\$ 0.26	\$ 0.04
Income from discontinued operations	0.03	—
Diluted net income per share	\$ 0.30	\$ 0.04

Cash Equivalents

Cash equivalents consist of all investments with maturities of three months or less from the date of acquisition.

Short-term Investments

Short-term investments primarily consist of investments in debt securities that have effective maturities greater than three months and less than twelve months from the date of acquisition. The Company classifies its short-term investments as "available-for-sale". Such investments are carried at fair value, with unrealized gains and losses included in the statement of comprehensive income (loss). The Company determines the cost of investments based on the specific identification method.

Restricted Investments

Restricted investments consist of certificates of deposit held with a financial institution as collateral under a facility lease and third-party service provider arrangements.

The following table summarizes the various investment categories at March 31, 2016 and December 31, 2015 (in thousands):

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
March 31, 2016				
Short-term investments				
Bank deposits	\$ 42,376	\$ 87	\$ —	\$ 42,463
Corporate bonds	24,268	84	(2)	24,350
Commercial paper	8,401	2	—	8,403
Asset backed securities	2,067	1	(1)	2,067
Corporate equity securities	1,811	2,814	—	4,625
	<u>\$ 78,923</u>	<u>\$ 2,988</u>	<u>\$ (3)</u>	<u>\$ 81,908</u>
December 31, 2015				
Short-term investments				
Bank deposits	\$ 43,043	\$ —	\$ (4)	\$ 43,039
Corporate bonds	41,238	—	(35)	41,203
Commercial paper	1,747	—	—	1,747
Asset backed securities	10,020	—	(5)	10,015
Corporate equity securities	1,843	4,944	—	6,787
	<u>\$ 97,891</u>	<u>\$ 4,944</u>	<u>\$ (44)</u>	<u>\$ 102,791</u>

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. Inventory levels are analyzed periodically and written down to its net realizable value if it has become obsolete, has a cost basis in excess of its expected net realizable value or is in excess of expected requirements. There were no write downs related to obsolete inventory recorded for the three months ended March 31, 2016 and 2015.

Goodwill and Other Identifiable Intangible Assets

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

	March 31, 2016	December 31, 2015
Indefinite lived intangible assets		
Acquired IPR&D	\$ 12,556	\$ 12,556
Goodwill	72,997	12,238
Definite lived intangible assets		
Complete technology	182,267	15,267
Less: Accumulated amortization	(5,883)	(3,762)
Trade name	2,642	2,642
Less: Accumulated amortization	(685)	(652)
Customer relationships	29,600	29,600
Less: Accumulated amortization	(7,674)	(7,304)
Total goodwill and other identifiable intangible assets, net	<u>\$ 285,820</u>	<u>\$ 60,585</u>

As Discussed in *Note 2-Business Combination*, on January 8, 2016, the Company completed its acquisition of OMT. As a result of the transaction, the Company recorded \$167.0 million of intangibles with definite lives and goodwill of \$60.8 million. Amortization of definite-lived intangible assets is computed using the straight-line method over the estimated useful life of the asset of 20 years. Amortization expense of \$2.5 million was recognized for the three months ended March 31, 2016 and amortization expense of \$0.6 million was recognized for the three months ended March 31, 2015. Estimated amortization expense for the year ending December 31, 2016 is \$10.6 million and estimated amortization expense for the years ended December 31, 2017 through 2020 is \$10.7 million per year. For each of the three months ended March 31, 2016 and 2015, there was no impairment of IPR&D or goodwill.

Commercial License Rights

Commercial license rights represent a portfolio of future milestone and royalty payment rights acquired from Selexis in April 2013 and April 2015. Individual commercial license rights acquired under the agreement are carried at allocated cost and approximate fair value. The carrying value of the license rights will be reduced on a pro-rata basis as revenue is realized over the term of the agreement. Declines in the fair value of individual license rights below their carrying value that are deemed to be other than temporary are reflected in earnings in the period such determination is made. As of March 31, 2016, management does not believe there have been any events or circumstances indicating that the carrying amount of its commercial license rights may not be recoverable.

Property and Equipment

Property and equipment is stated at cost and consists of the following (in thousands):

	March 31, 2016	December 31, 2015
Lab and office equipment	\$ 2,482	\$ 2,248
Leasehold improvements	273	273
Computer equipment and software	636	632
	3,391	3,153
Less accumulated depreciation and amortization	(2,824)	(2,781)
Total property and equipment, net	\$ 567	\$ 372

Depreciation of equipment is computed using the straight-line method over the estimated useful lives of the assets, which range from three to ten years. Leasehold improvements are amortized using the straight-line method over the shorter of the estimated useful lives or the related lease term. Depreciation expense of \$0.1 million was recognized for each of the three months ended March 31, 2016 and 2015, respectively, which is included in operating expenses.

Other Current Assets

Other current assets consist of the following (in thousands):

	March 31, 2016	December 31, 2015
Prepaid expenses	\$ 1,087	\$ 1,177
Other receivables	475	731
Total other current assets	\$ 1,562	\$ 1,908

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	March 31, 2016	December 31, 2015
Compensation	\$ 854	\$ 1,711
Professional fees	754	726
Amounts owed to former licensees	695	915
Royalties owed to third parties	937	823
Other	429	1,222
Total accrued liabilities	\$ 3,669	\$ 5,397

Other Long-Term Liabilities

Other long-term liabilities consist of the following (in thousands):

	March 31, 2016	December 31, 2015
Deposits	\$ 298	\$ 268
Deferred rent	107	—
Other	41	29
Total other long-term liabilities	\$ 446	\$ 297

Contingent Liabilities

In connection with the Company's acquisition of CyDex in January 2011, the Company recorded a contingent liability, for amounts potentially due to holders of the CyDex CVRs and former license holders. The liability is periodically assessed based on events and circumstances related to the underlying milestones, royalties and material sales. Any change in fair value is recorded in the Company's consolidated statement of operations. The carrying amount of the liability may fluctuate significantly and actual amounts paid under the CVR agreements may be materially different than the carrying amount of the liability. The fair value of the liability at March 31, 2016 and December 31, 2015 was \$6.9 million and \$9.5 million, respectively. The Company recorded a fair-value adjustment to increase the liability by \$0.2 million and \$1.2 million for the three months ended March 31, 2016 and 2015, respectively. There was a revenue-sharing payment of \$2.8 million and \$3.2 million to CyDex CVR holders during the three months ended March 31, 2016 and 2015, respectively.

In connection with the Company's acquisition of Metabasis in January 2010, the Company issued to Metabasis stockholders four tradable CVRs, one CVR from each of four respective series of CVR, for each Metabasis share. The CVRs will entitle Metabasis stockholders to cash payments as frequently as every six months as cash is received by the Company from proceeds from the sale or partnering of any of the Metabasis drug development programs, among other triggering events. The fair values of the CVRs are remeasured at each reporting date through the term of the related agreement. Any change in fair value is recorded in the Company's consolidated statement of operations. The carrying amount of the liability may fluctuate significantly based upon quoted market prices and actual amounts paid under the agreements may be materially different than the carrying amount of the liability. The fair value of the liability was estimated to be \$2.4 million and \$4.0 million as of March 31, 2016 and December 31, 2015, respectively. The Company recorded an increase in the liability for Metabasis-related CVRs of \$1.1 million and a decrease of \$1.2 million for the three months ended March 31, 2016 and 2015, respectively. The Company paid Metabasis CVR holders \$2.6 million for the three months ended March 31, 2016. No payments were made to Metabasis CVR holders for the three months ended March 31, 2015.

Revenue Recognition

Royalties on sales of products commercialized by the Company's partners are recognized in the quarter reported to Ligand by the respective partner. Generally, the Company receives royalty reports from its licensees approximately one quarter in arrears due to the fact that its agreements require partners to report product sales between 30 and 60 days after the end of the quarter. The Company recognizes royalty revenues when it can reliably estimate such amounts and collectability is reasonably assured. Under this accounting policy, the royalty revenues reported are not based upon estimates and such royalty revenues are typically reported to the Company by its partners in the same period in which payment is received.

Revenue from material sales of Captisol is recognized upon transfer of title, which normally passes upon shipment to the customer, provided all other revenue recognition criteria have been met. All product returns are subject to the Company's credit and exchange policy, approval by the Company and a 20% restocking fee. To date, product returns by customers have not been material to net material sales in any related period. The Company records revenue net of product returns, if any, and sales tax collected and remitted to government authorities during the period.

The Company analyzes its revenue arrangements and other agreements to determine whether there are multiple elements that should be separated and accounted for individually or as a single unit of accounting. For multiple element contracts, arrangement consideration is allocated at the inception of the arrangement to all deliverables on the basis of relative selling price, using a hierarchy to determine selling price. Management first considers VSOE, then TPE and if neither VSOE nor TPE exist, the Company uses its best estimate of selling price.

Many of the Company's revenue arrangements for Captisol involve a license agreement with the supply of manufactured Captisol product. Licenses may be granted to pharmaceutical companies for the use of Captisol product in the development of pharmaceutical compounds. The supply of the Captisol product may be for all phases of clinical trials and through commercial availability of the host drug or may be limited to certain phases of the clinical trial process. Management believes that the Company's licenses have stand-alone value at the outset of an arrangement because the customer obtains the right to use Captisol in its formulations without any additional input by the Company.

Other nonrefundable, upfront license fees are recognized as revenue upon delivery of the license, if the license is determined to have standalone value that is not dependent on any future performance by the Company under the applicable collaboration agreement. Nonrefundable contingent event-based payments are recognized as revenue when the contingent event is met, which is usually the earlier of when payments are received or collections are assured, provided that it does not require future performance by the Company. The Company occasionally has sub-license obligations related to arrangements for which it receives license fees, milestones and royalties. The Company evaluates the determination of gross versus net reporting based on each individual agreement.

Sales-based contingent payments from partners are accounted for similarly to royalties, with revenue recognized upon achievement of the sales targets assuming all other revenue recognition criteria for milestones are met. Revenue from development and regulatory milestones is recognized when earned, as evidenced by written acknowledgement from the collaborator, provided that (1) the milestone event is substantive, its achievability was not reasonably assured at the inception of the agreement, and the Company has no further performance obligations relating to that event, and (2) collectability is reasonably assured. If these criteria are not met, the milestone payment is recognized over the remaining period of the Company's performance obligations under the arrangement.

Revenue from research funding under our collaboration agreements is earned and recognized on a percentage-of completion basis as research hours are incurred in accordance with the provisions of each agreement.

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,	
	2016	2015
Stock-based compensation expense as a component of:		
Research and development expenses	\$ 1,585	\$ 920
General and administrative expenses	2,533	1,994
	<u>\$ 4,118</u>	<u>\$ 2,914</u>

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,	
	2016	2015
Risk-free interest rate	1.5%	1.8%
Dividend yield	—	—
Expected volatility	50%	58%
Expected term	6.6	6.6
Forfeiture rate	5.0%	8.5%

Income Taxes

Income taxes are accounted for under the liability method. This approach requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of differences between the tax basis of assets or liabilities and their carrying amounts in the consolidated financial statements. The Company provides a valuation allowance for deferred tax assets if it is more likely than not that these items will expire before we are able to realize their benefit. The Company calculates the valuation allowance in accordance with the authoritative guidance relating to income taxes under ASC 740, *Income Taxes*, which requires an assessment of both positive and negative evidence that is available regarding the reliability of these deferred tax assets, when measuring the need for a valuation allowance. Developing the provision for income taxes requires significant judgment and expertise in federal and state income tax laws, regulations and strategies, including the determination of deferred tax assets and liabilities and, if necessary, any valuation allowances that may be required for deferred tax assets. The Company's judgments and tax strategies are subject to audit by various taxing authorities. While management believes the Company has provided adequately for its income tax liabilities in its consolidated financial statements, adverse determinations by these taxing authorities could have a material adverse effect on the Company's consolidated financial condition and results of operations.

Variable Interest Entities

The Company identifies an entity as a VIE if either: (1) the entity does not have sufficient equity investment at risk to permit the entity to finance its activities without additional subordinated financial support, or (2) the entity's equity investors lack the essential characteristics of a controlling financial interest. The Company performs ongoing qualitative assessments of its VIEs to determine whether the Company has a controlling financial interest in any VIE and therefore is the primary beneficiary. If the Company is the primary beneficiary of a VIE, it consolidates the VIE under applicable accounting guidance. If the Company is no longer the primary of a VIE or the entity is no longer considered as a VIE as facts and circumstances changed, it deconsolidates the entity under the applicable accounting guidance. Beginning May 2015, the Company deconsolidated Viking, a previously reported VIE, and elected to record its investment in Viking under the equity method of accounting as Viking is no longer considered a VIE and the Company does not have voting control or other elements of control that would require consolidation. The investment is subsequently adjusted for the Company's share of Viking's operating results, and if applicable, cash contributions and distributions, which is reported on a separate line in our condensed consolidated statement of operations called "Equity in net losses of Viking Therapeutics". On the condensed consolidated balance sheet, the Company reports its investment in Viking on a separate line in the non-current assets section called "Investment in Viking Therapeutics". See Note 3, *Investment in Viking Therapeutics*, for additional details.

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 accounts 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.

Recent Accounting Pronouncements

In May 2014, FASB issued ASU 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 is effective for annual periods beginning after December 15, 2016 and interim periods within those annual periods. The revenue standard's core principle is built on the

contract between a vendor and a customer for the provision of goods and services. It attempts to depict the exchange of rights and obligations between the parties in the pattern of revenue recognition based on the consideration to which the vendor is entitled. To accomplish this objective, the standard requires five basic steps: (1) identify the contract with the customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, (5) recognize revenue when (or as) the entity satisfies a performance obligation. Management is currently evaluating the effect the adoption of this standard will have on the Company's financial statements.

In April 2015, FASB issued ASU 2015-03, *Interest-Imputation of Interest: Simplifying the Presentation of Debt Issuance Costs*. This update was issued to simplify the presentation for debt issuance costs. Upon adoption, such costs shall be presented on our consolidated balance sheets as a direct deduction from the carrying amount of the related debt liability and not as a deferred charge presented in Other assets on our consolidated balance sheets. This amendment will be effective for interim and annual periods beginning on January 1, 2016, and is required to be retrospectively adopted. During the three-month period ended March 31, 2016, management adopted the change in the presentation on our consolidated balance sheets accordingly (see Note 6 for details).

In January 2016, the FASB issued *ASU 2016-01 Recognition and Measurement of Financial Assets and Financial Liabilities* that amends the accounting and disclosures of financial instruments, including a provision that requires equity investments (except for investments accounted for under the equity method of accounting) to be measured at fair value with changes in fair value recognized in current earnings. The new standard is effective for interim and annual periods beginning on January 1, 2018. We are currently evaluating the impact that this new standard will have on our consolidated financial statements.

In February 2016, the FASB issued a new accounting standard that amends the guidance for the accounting and disclosure of leases. This new standard requires that lessees recognize the assets and liabilities that arise from leases on the balance sheet and disclose qualitative and quantitative information about their leasing arrangements. The new standard is effective for interim and annual periods beginning on January 1, 2019. We are currently evaluating the impact that this new standard will have on our consolidated financial statements.

In March 2016, the FASB issued *ASU 2016-09, Compensation – Stock Compensation*, which identifies areas for simplification involving several aspects of accounting for stock-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross stock compensation expense with actual forfeitures recognized as they occur, as well as certain classifications on the statement of cash flows. ASU No. 2016-09 is effective for reporting periods beginning after December 31, 2016. Early adoption is permitted. We are currently assessing the potential impact that the adoption of ASU No. 2016-09 will have in our condensed consolidated financial statements.

2. Business Combination

On January 8, 2016, the Company acquired substantially all of the assets and liabilities of OMT. OMT is a biotechnology company engaged in the genetic engineering of animals for the generation of human therapeutic antibodies through its OmniAb® technology, which currently offers three transgenic animal platforms for license, including OmniRat®, OmniMouse® and OmniFlic®. The transaction, which was accounted for as a business combination, added 16 partnered programs to the Company's portfolio and provides the Company with opportunities for further licensing and collaborations in the area.

The aggregate acquisition consideration was \$174.0 million, consisting of (in thousands):

Cash consideration	\$	96,359
Total share consideration:		
Actual number of shares issued		793
Multiplied by: Ligand closing share price on January 8, 2016	\$	97.92
Total share consideration		77,658
Total consideration	\$	174,017

The acquisition consideration is subject to certain customary post-closing adjustments up to 15 months from January 8, 2016, in accordance with the terms and subject to the conditions contained in the Merger Agreement between the Company and OMT.

The acquisition consideration was preliminarily allocated to the acquisition date fair values of acquired assets and assumed liabilities as follows (in thousands):

Cash and cash equivalents	\$	3,504
Accounts receivable		5
Income tax receivable		140
Prepaid expenses and other current assets		2
Deferred tax liabilities, net		(56,114)
Intangible asset with finite life - core technology		167,000
Liabilities assumed		(1,279)
Goodwill		60,759
Total consideration	\$	174,017

The fair value of the core technology, or OMT's OmniAb technology, was based on the discounted cash flow method that estimated the present value of a hypothetical royalty stream derived from the licensing of the OmniAb technology. These projected cash flows were discounted to present value using a discount rate of 15.5%. The fair value of the core technology is being amortized on a

straight-line bases over the estimated useful life of 20 years.

The excess of the acquisition date consideration over the fair values assigned to the assets acquired and the liabilities assumed of \$60.8 million was recorded as goodwill, which is not deductible for tax purposes and is primarily attributable to

Table of Contents

OMT's revenue growth from combining the OMT and Ligand businesses and workforce, as well as the benefits of access to different markets and customers.

The purchase price allocations were prepared on a preliminary basis and are subject to change as additional information becomes available concerning the fair value and tax basis of the assets acquired and liabilities assumed. Any measurement period adjustments to the OMT purchase price allocation will be made as soon as practicable but no later than one year from the date of acquisition.

The following table presents supplemental pro forma information for the three months ended March 31, 2016 and March 31, 2015, as if the acquisition of OMT had occurred on January 1, 2015 (in thousands except for EPS):

	March 31, 2016	March 31, 2015
Revenue	\$ 32,124	\$ 17,152
Net income	\$ 8,877	\$ (474)
Basic earnings per share:	\$ 0.43	\$ (0.02)
Diluted earnings per share:	\$ 0.40	\$ (0.02)

The unaudited pro forma consolidated results include pro forma adjustments that assume the acquisition occurred on January 1, 2015. The primary adjustments include: (i) the \$0.3 million share based compensation expenses related to the stock awards issued to the retained OMT employees after the acquisition, and (ii) additional intangible amortization expense of \$0.2 million and \$2.1 million was included in the quarter ended March 31, 2016 and 2015, respectively. The adjustments also include \$2.5 million license revenue recognized by OMT from January 1, 2016 to the acquisition date. The unaudited pro forma consolidated results are not necessarily indicative of what our consolidated results of operations actually would have been had we completed the acquisition on January 1, 2015. In addition, the unaudited pro forma consolidated results do not purport to project the future results of operations of the combined company nor do they reflect the expected realization of any cost savings associated with the acquisition.

3. Fair Value Measurements

The Company measures certain financial assets and liabilities at fair value on a recurring basis. Fair value is a market-based measurement that should be determined using assumptions that market participants would use in pricing an asset or liability. The Company establishes a three-level hierarchy to prioritize the inputs used in measuring fair value. The levels are described below with level 1 having the highest level input that is significant to the measurement and level 3 having the lowest:

Level 1 - Quoted prices in active markets;

Level 2 - Inputs other than the quoted prices in active markets that are observable either directly or indirectly; and

Level 3 - Unobservable inputs in which there is little or no market data, which require the Company to develop its own assumptions.

Table of Contents

The following table provides a summary of the carrying value of assets and liabilities that are measured at fair value on a recurring basis as of March 31, 2016 (in thousands). There were no transfers between Level 1 and Level 2 securities during the three months ended March 31, 2016:

Fair Value Measurements at Reporting Date Using				
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents ⁽¹⁾	\$ 5,316	\$ —	\$ 5,316	\$ —
Short-term investments ⁽²⁾	81,908	4,625	77,283	—
Note receivable Viking ⁽³⁾	4,767	—	—	4,767
Total assets	\$ 91,991	\$ 4,625	\$ 82,599	\$ 4,767
Liabilities:				
Current contingent liabilities-CyDex ⁽⁴⁾	\$ 5,285	\$ —	\$ —	\$ 5,285
Long-term contingent liabilities-CyDex ⁽⁴⁾	1,578	—	—	1,578
Long-term contingent liabilities-Metabasis ⁽⁵⁾	2,444	—	2,444	—
Liability for amounts owed to former licensees ⁽⁶⁾	534	534	—	—
Total liabilities	\$ 9,841	\$ 534	\$ 2,444	\$ 6,863

The following table provides a summary of the assets and liabilities that are measured at fair value on a recurring basis as of December 31, 2015 (in thousands):

Fair Value Measurements at Reporting Date Using				
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs * (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents ⁽¹⁾	\$ 3,015	\$ —	\$ 3,015	\$ —
Short-term investments ⁽²⁾	92,775	6,786	85,989	—
Viking note receivable ⁽³⁾	4,782	—	—	4,782
Total assets	\$ 100,572	\$ 6,786	\$ 89,004	\$ 4,782
Liabilities:				
Current contingent liabilities-CyDex ⁽⁴⁾	\$ 7,812	\$ —	\$ —	\$ 7,812
Current contingent liabilities-Metabasis ⁽⁵⁾	\$ 2,602	—	2,602	—
Long-term contingent liabilities-Metabasis ⁽⁵⁾	1,355	—	1,355	—
Long-term contingent liabilities-CyDex ⁽⁴⁾	1,678	—	—	1,678
Liability for amounts owed to former licensees ⁽⁶⁾	794	794	—	—
Total liabilities	\$ 14,241	\$ 794	\$ 3,957	\$ 9,490

- (1) Highly liquid investments with maturities less than 90 days from the purchase date are recorded as cash equivalents that 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) 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

Table of Contents

similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.

- (3) 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 50% at March 31, 2016. Changes in these assumptions may materially affect the fair value estimate.
- (4) The fair value of the liabilities for CyDex contingent liabilities were determined based on the income approach using a Monte Carlo analysis. The fair value is subjective and is affected by changes in inputs to the valuation model including management's assumptions regarding revenue volatility, probability of commercialization of products, 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 and CVR holders. Changes in these assumptions can materially affect the fair value estimate.
- (5) The liability for CVRs for Metabasis are determined using quoted market prices in an inactive market 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.
- (7) The co-promote termination payments receivable represents a receivable for future payments to be made by Pfizer related to product sales and is recorded at its fair value. The receivable and liability will remain equal. The fair value is determined based on a valuation model using an income approach.

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

	March 31, 2016	December 31, 2015
Range of annual revenue subject to revenue sharing ⁽¹⁾	\$23.5 million	\$22.5 million
Revenue volatility	25%	25%
Average probability of commercialization	78%	73%
Sales beta	0.30	0.40
Credit rating	BB	BB
Equity risk premium	6%	6%

- (1) Revenue subject to revenue sharing represent management's estimate of the range of total annual revenue subject to revenue sharing (i.e. annual revenues in excess of \$15 million) through December 31, 2016, which is the term of the CVR agreement.

A reconciliation of the level 3 financial instruments as of March 31, 2016 is as follows (in thousands):

Assets:

Fair value of level 3 financial instrument assets as of December 31, 2015	\$ 4,782
Viking note receivable fair market value adjustment	(15)
Fair value of level 3 financial instrument assets as of March 31, 2016	<u>\$ 4,767</u>

Liabilities:

Fair value of level 3 financial instrument liabilities as of December 31, 2015	\$ 9,490
Payments to CVR and other former license holders	(2,828)
Fair value adjustments to contingent liabilities	201
Fair value of level 3 financial instrument liabilities as of March 31, 2016	<u>\$ 6,863</u>

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 market rate in an inactive market, 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 \$373.5 million as of March 31, 2016. The carrying value of the notes does not reflect the market rate. See Note 7 *Financing Arrangements* for additional information.

Viking Therapeutics

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. See Note 3 *Investment in Viking Therapeutics* for additional information. The market value of the Company's investment in Viking was \$6.8 million as of March 31, 2016. The carrying value of the investment in Viking does not reflect the market value.

4. Investment in Viking Therapeutics

In 2014, the Company entered into a MLA with Viking to license the rights to five of the Company's programs to Viking. Under the terms of the MLA, no consideration was exchanged upon execution, but rather Viking agreed to issue shares of Viking common stock with an aggregate value of approximately \$29.2 million upon consummation of Viking's IPO. As part of this transaction, the Company also extended a \$2.5 million convertible loan to Viking under a LSA. As a result of these transactions, the Company determined it held a variable interest in Viking. The Company considered certain criteria in the accounting guidance for VIEs, and determined that Viking was a VIE and Ligand was the primary beneficiary of Viking. As a result, the Company consolidated Viking on its financial statements from May 2014 through May 2015, the effective date of Viking's IPO. The Company recorded 100% of the losses incurred as net loss attributable to noncontrolling interest because it was the primary beneficiary with no equity interest in the VIE.

In May 2015, Viking completed the Viking IPO and issued the Company approximately 3.7 million shares of Viking common stock with an aggregate value of \$29.2 million based on the IPO price of \$8.00 per share. In connection with the Viking IPO, the Company purchased 1.1 million shares of Viking common stock for an aggregate price of \$9.0 million at the initial public offering price. Upon completion of Viking's IPO, the Company determined that Viking was no longer a VIE and the Company did not have any other element of control that would require consolidation of Viking. In May 2015, the Company deconsolidated Viking and began to account for its equity investment in Viking under the equity method. The Company owned an aggregate of 49.4% of the outstanding common stock of Viking at March 31, 2016.

In January 2016, the Company entered into an amendment to the LSA with Viking to extend the maturity of the convertible loan to May 2017, reduce the interest rate from 5.0% to 2.5%, and extend the lock up period by one year such that the Company may not sell, transfer, or dispose of any Viking securities prior to January 2017. Additionally, upon the consummation of a subsequent capital financing transaction, Viking will be required to repay \$1.5 million of the Viking Note obligation to the Company, with at least \$0.3 million to be paid in cash and the remaining amount to be paid in the form and at the price of the Viking equity securities sold in the financing transaction. Upon maturity or further payments, the Company may elect to receive equity of Viking common stock or cash equal to 200% of the principal amount plus accrued and unpaid interest. The Company has opted to account for the Viking convertible note receivable at fair value. As of March 31, 2016, the aggregate fair market value of the note receivable was \$4.8 million. For the three months ended March 31, 2016, the Company recorded a \$15,000 decrease in the fair value of the Viking convertible note. See Note 2, *Fair Value Measurements* for additional details.

Table of Contents

5. Lease Obligations

The Company leases office and laboratory facilities in California, Kansas and New Jersey. These leases expire between 2016 and 2023, some of which are subject to annual rent increases which range from 3.0% to 3.5%. The Company currently subleases office and laboratory space in California and New Jersey. The following table provides a summary of operating lease obligations and payments expected to be received from sublease agreements as of March 31, 2016 (in thousands):

Operating lease obligations:	Lease Termination Date	Less than 1 year	1-2 years	3-4 years	Thereafter	Total
Corporate headquarters- La Jolla, CA	June 2019	\$ 704	\$ 1,465	\$ 187	\$ —	\$ 2,356
Corporate headquarters-San Diego, CA	April 2023	52	261	277	306	896
Bioscience and Technology Business Center- Lawrence, KS	December 2017	54	41	—	—	95
Vacated office and research facility- Cranbury, NJ	August 2016	1,089	—	—	—	1,089
Total operating lease obligations		\$ 1,899	\$ 1,767	\$ 464	\$ 306	\$ 4,436
Sublease payments expected to be received:						
Corporate headquarters- La Jolla, CA	June 2019	\$ 443	\$ 920	\$ 116	\$ —	\$ 1,479
Office and research facility- Cranbury, NJ	August 2016	88	—	—	—	88
Net operating lease obligations		\$ 1,368	\$ 847	\$ 348	\$ 306	\$ 2,869

As of March 31, 2016 and December 31, 2015, the Company had lease exit obligations of \$0.6 million and \$0.9 million, respectively. For the three months ended March 31, 2016 and 2015, the Company made cash payments, net of sublease payments received of \$0.6 million and \$0.9 million, respectively. The Company recognized adjustments for accretion and changes in leasing assumptions of \$0.2 million for the three months ended March 31, 2016 and 2015.

6. Financing Arrangements

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.

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, Ligand must deliver cash to settle the principal and may deliver cash or shares of common stock, at the option of the Company, to settle any premium due upon conversion.

In accordance with accounting guidance for debt related to conversion and other options, the Company separately accounted for the debt and equity components of the 2019 Convertible Senior Notes by allocating the \$245.0 million total proceeds between the debt component and the embedded conversion option, or equity component, due to Ligand's ability to settle the 2019 Convertible Senior Notes in cash for the principal portion and to settle any premium in cash or common stock, at the Company's election. The debt allocation was performed in a manner that reflected the Company's non-convertible borrowing rate for similar debt of 5.83% derived from independent valuation analysis. The initial debt value of \$192.5 million accretes at 5.83% to reach \$245.0 million at the maturity date. The equity component of the 2019 Convertible Senior Notes was recognized as a debt discount and represents the difference between the \$245.0 million proceeds at issuance of the 2019 Convertible Senior Notes and the fair value of the debt allocation on their respective issuance dates. The debt discount is amortized to interest expense using the effective interest method over the expected life of a similar liability without an equity component. The 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. As of March 31, 2016, the "if-converted value" exceeded the principal amount of the 2019 Convertible Senior Notes by \$104.6 million.

In connection with the issuance of the 2019 Convertible Senior Notes, the Company incurred \$5.7 million of issuance costs, which primarily consisted of underwriting, legal and other professional fees. The portions of these costs allocated to the equity components totaling \$1.2 million were recorded as a reduction to additional paid-in capital. The portions of these costs allocated to the liability components totaling \$4.5 million are recorded net of the liability component on the balance sheet beginning in 2016 in accordance with ASU 2015-03, *Interest-Imputation of Interest: Simplifying the Presentation of Debt Issuance Costs*. The portions allocated to the liability components are amortized to interest expense using the effective interest method over the expected life of the 2019 Convertible Senior Notes.

The Company determined the expected life of the debt discount for the 2019 Convertible Senior Notes to be equal to the original five-year term of the notes. The carrying value of the equity component related to the 2019 Convertible Senior Notes as of March 31, 2016 and December 31, 2015, net of issuance costs, was \$51.3 million.

Table of Contents

Convertible Bond Hedge and Warrant Transactions

In August 2014, in connection with the issuance of the 2019 Convertible Senior Notes, to minimize the impact of potential dilution to the Company's common stock upon conversion of such notes, the Company entered into convertible bond hedges and sold warrants covering approximately 3,264,643 shares of its common stock. The convertible bond hedges have an exercise price of \$75.05 per share and are exercisable when and if the 2019 Convertible Senior Notes are converted. If upon conversion of the 2019 Convertible Senior Notes, the price of the Company's common stock is above the exercise price of the convertible bond hedges, the counterparties will deliver shares of common stock and/or cash with an aggregate value approximately equal to the difference between the price of common stock at the conversion date and the exercise price, multiplied by the number of shares of common stock related to the convertible bond hedge transaction being exercised. The convertible bond hedges and warrants described below are separate transactions entered into by the Company and are not part of the terms of the 2019 Convertible Senior Notes. Holders of the 2019 Convertible Senior Notes and warrants will not have any rights with respect to the convertible bond hedges. The Company paid \$48.1 million for these convertible bond hedges and recorded the amount as a reduction to additional paid-in capital.

Concurrently with the convertible bond hedge transactions, the Company entered into warrant transactions whereby it sold warrants to acquire, approximately 3,264,643 shares of common stock with an exercise price of approximately \$125.08 per share, subject to certain adjustments. The warrants have various expiration dates ranging from November 13, 2019 to April 22, 2020. The warrants will have a dilutive effect to the extent the market price per share of common stock exceeds the applicable exercise price of the warrants, as measured under the terms of the warrant transactions. The Company received \$11.6 million for these warrants and recorded this amount to additional paid-in capital. The common stock issuable upon exercise of the warrants will be in unregistered shares, and the Company does not have the obligation and does not intend to file any registration statement with the SEC registering the issuance of the shares under the warrants.

The carrying values and the fixed contractual coupon rates of the Company's financing arrangements as of March 31, 2016 and December 31, 2015 were as follows (in thousands):

	March 31, 2016	December 31, 2015
<i>2019 Convertible Senior Notes</i>		
Principal amount outstanding	\$ 245,000	\$ 245,000
Unamortized discount	(37,169)	(39,628)
Net carrying amount	207,831	205,372
Less: Unamortized deferred financing costs	3,178	3,387
Total notes payable	\$ 204,653	\$ 201,985

7. Income Tax

The Company's income tax provision from continuing operations for the three months ended March 31, 2016 was \$3.7 million. The Company's income tax provision from discontinued operations for the three months ended March 31, 2016 was \$0.4 million. The Company's income tax provision from continuing operations for the three months ended March 31, 2015 was \$15,000.

The Company estimates its annual effective income tax rate for continuing operations to be approximately 39.4% for 2016, compared to the 1.9% effective income tax rate for 2015. The estimated effective tax rate for 2016 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. Any significant contingent consideration expense or income will result in a significantly higher or lower effective tax rate because contingent consideration expense is largely not deductible for tax purposes and contingent consideration income is not taxable. Other permanent differences between financial statement income and taxable income relate to items such as stock compensation, meals and entertainment charges, and compensation of officers. The primary difference in the estimated effective tax rate in 2016 compared to 2015 relates to the release of the Company's valuation allowance in 2015. Our estimated annual effective tax rate for the three months ended March 31, 2015 is primarily attributable to an increase in our deferred tax liability associated with the tax amortization of acquired indefinite lived IPR&D intangible assets.

Table of Contents

The Company maintains a valuation allowance in the amount of \$8.9 million against certain U.S. state NOLs, federal NOLs arising from Pre-ASC 718 excess stock compensation benefits and federal research and development tax credits. Each reporting period, the Company evaluates the need for a valuation allowance on our deferred tax assets by jurisdiction and adjusts our estimates as more information becomes available. The Company will reassess the ability to realize the deferred tax assets on a quarterly basis. If it is more likely than not that it will not realize the recognized deferred tax assets, then all or a portion of the valuation allowance may need to be re-established, which would result in a charge to tax expense. Conversely if new events indicate that it is more likely than not that we will realize additional deferred tax assets, then all or a portion of the remaining valuation allowance may be released, which would result in a tax benefit.

As of March 31, 2016, the Company had unrecognized tax benefits of approximately \$33.6 million related to uncertain tax positions that, if recognized, would result in adjustments to the related deferred tax assets and reduce our annual effective tax rate, subject to the remaining valuation allowance.

The Company files income tax returns in the U.S. and in various state jurisdictions with varying statutes of limitations. The Company is no longer subject to income tax examination by tax authorities for years prior to 2011; however, its net operating loss and research credit carry-forwards arising prior to that year are subject to adjustment. It is the Company's policy to recognize interest expense and penalties related to income tax matters as a component of income tax expense. As of March 31, 2016, there was no material accrued interest related to uncertain tax positions.

8. 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 our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

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

	Stock Options		Restricted Stock Award	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Grant Date Fair Value
Balance as of December 31, 2015	1,683,341	\$ 34.23	130,749	\$ 60.36
Granted	241,015	88.84	229,847	94.76
Exercised	(44,029)	23.00	(34,649)	52.18
Balance as of March 31, 2016	1,880,327	41.50	325,947	72.88

Net cash received from options exercised during the three months ended March 31, 2016 and 2015 was approximately \$1.0 million and \$0.8 million, respectively. Tax deductions for stock options and restricted stock which have exceeded stock based compensation expense in previous years have not been recognized by the Company. The Company will monitor the utilization of the net operating losses and recognize the excess tax deduction when that deduction reduces taxes payable.

As of March 31, 2016, 42,000 shares were available for future option grants or direct issuance under the Company's 2002 Stock Incentive Plan, as amended.

Employee Stock Purchase Plan

The Company's Amended ESPP allows participating employees to purchase up to 1,250 shares of Ligand common stock during each offering period, but in no event may a participant purchase more than 1,250 shares of common stock during any calendar year. The length of each offering period is six months, and employees are eligible to participate in the first offering period beginning after their hire date. This plan is described in further detail in Note 8, Stockholders' Equity, of Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

There were no shares of common stock issued under the amended ESPP during the three months ended March 31, 2016 and 2015, respectively. As of March 31, 2016, 72,367 shares were available for future purchases under the Amended ESPP.

Table of Contents

Issuance of common stock

In conjunction with the acquisition of OMT, the Company issued 793,070 shares of its common stock based on a 20-day volume-weighted average price of \$107.66 of its common stock calculated three days prior to closing.

9. 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 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.

Paragraph IV Certification by Par Pharmaceuticals

On January 7, 2016, the Company received a paragraph IV certification from Par Sterile Products, LLC, a subsidiary of Par Pharmaceuticals, Inc., or 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 states it is Par's position 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 are invalid and/or will not be infringed by Par's manufacture, use or sale of the product for which the ANDA was submitted. On February 19, 2016, Merck filed an action against Par in the United States District Court for the District of New Jersey, asserting that Par's manufacture, use or sale of the product for which the ANDA was submitted would infringe Merck's U.S. Patent No. 9,023,790. The case against Par is captioned Merck Sharpe & Dohme Corp. v. Par Sterile Products, LLC, Par Pharmaceuticals, Inc., Par Pharmaceutical Companies, Inc., and Par Pharmaceutical Holdings, Inc., No.16-cv-00948.

10. Subsequent events

Viking

On April 13, 2016, Viking closed its underwritten public offering of 7.5 million shares of common stock and warrants to purchase up to 7.5 million shares of its common stock at a price of \$1.25 per share of its common stock and related warrants. The warrant has an exercise price of \$1.50 per share, immediately exercisable and will expire on April 13, 2021. As part of this public offering, the Company purchased 560,000 shares of common stock and warrants to purchase 560,000 shares of Viking's common stock for a total purchase price of \$0.7 million. The purchased shares of common stock and warrants are subject to the same terms as the shares issued in this offering. In addition, on April 13, 2016, pursuant to the terms of the amendment to the LSA that was entered in January 2016 between Ligand and Viking (see details in Note 4), Viking repaid \$0.3 million of the convertible notes in cash, and issued the Company 960,000 shares of its common stock and warrants to purchase 960,000 shares of its common stock as repayment of \$1.2 million of the convertible notes. The shares received as part of the repayment are subject to a lock-up period that ends on January 23, 2017 in accordance with the amended LSA. Our equity ownership of Viking decreased to approximately 38% after this public offering and the repayment of the convertible notes.

Table of Contents

Sublease

In April 2016, the Company executed a sublease agreement for our current corporate headquarters facility in La Jolla, California. The sublease term will commence in May 2016 and expire in June 2019. The sublessee is obligated to pay a base rent of approximately \$51,000 per month for the first twelve months and is subject to 3% annual increases through the sublease term.

CorMatrix

On May 3, 2016, the Company entered into an agreement to acquire certain economic rights of CorMatrix®. Pursuant to the Purchase Agreement, the Company paid \$17.5 million in cash to acquire a portion of revenues (“synthetic royalties”) from CorMatrix’s existing marketed products and will have the right to receive potential future synthetic royalties from future marketed products, if any. Ligand is entitled to a minimum of \$2.75 million of synthetic royalty annually. The synthetic royalty rate on the pipeline assets is a mid-single digit royalty. The agreement will terminate with respect to each of CorMatrix’s products upon the later of (i) May 3, 2026 and (ii) 10 years from the date of the first commercial sale of such product.

Relationships between the Parties

As previously disclosed in Ligand’s filings, Jason Aryeh is a director of both Ligand and CorMatrix. Mr. Aryeh beneficially owns equity of CorMatrix representing approximately .56% of CorMatrix’s outstanding equity. Mr. Aryeh recused himself from all of the board’s consideration of the Purchase Agreement, including any financial analysis, the terms of the Purchase Agreement and the vote to approve the Purchase Agreement and the related transactions. In addition, prior to the board’s consideration of the Purchase Agreement, Mr. David Knott, a member of Ligand’s board, disclosed to the board that he beneficially owns equity of CorMatrix representing approximately .47% of CorMatrix’s outstanding equity. All of the disinterested directors of Ligand approved the Purchase Agreement and related transactions with CorMatrix.

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.

Table of Contents

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

Overview

We are a biotechnology company with a business model based on developing or acquiring assets which generate royalty, milestone or other passive revenue for Ligand and using a lean corporate cost structure. By diversifying our portfolio of assets across numerous technology types, therapeutic areas, drug targets, and industry partners, we offer investors an opportunity for broad exposure to multiple pharmaceutical and biotechnology assets without the risk associated with developing only one or a limited number of drugs. These therapies address the unmet medical needs of patients for a broad spectrum of diseases including thrombocytopenia, multiple myeloma, hepatitis, ventricular fibrillation, muscle wasting, Alzheimer's disease, dyslipidemia, diabetes, anemia, asthma, FSGS, menopausal symptoms and osteoporosis. Our partners include several of the world's leading pharmaceutical companies such as Novartis, Amgen, Merck, Pfizer, Baxter, and Eli Lilly.

Significant Developments

Recent Acquisitions

- In May 2016, Ligand acquired the economic rights to multiple programs owned by CorMatrix. Ligand paid \$17.5 million and in return will receive a portion of revenue (synthetic royalty) from CorMatrix's existing marketed products and will have the right to receive future synthetic royalties from potential future products. CorMatrix's products are medical devices that are designed to permit the development and regrowth of human tissue. This transaction will be immediately accretive to Ligand and represents Ligand's entry into the field of medical devices.
- In January 2016, Ligand acquired OMT, Inc. and its OmniAb™ platform for consideration valued at the time of the acquisition at approximately \$178 million. OmniAb license agreements existing at the time of acquisition initially added 16 shots on goal, with the potential for additional compounds to be generated from these partnerships. Partners at the time of acquisition included Amgen, Celgene, Genmab, Janssen, Merck KGaA, Pfizer, Seattle Genetics, Five Prime, Symphogen and various other biotechnology and pharmaceutical companies.

Portfolio Program Progress

Promacta®/Revolade®

- The European Commission approved Revolade® (eltrombopag), a Novartis product, for the treatment of pediatric (age 1 and above) chronic immune (idiopathic) thrombocytopenic purpura (ITP) patients who are refractory to other treatments (e.g., corticosteroids, immunoglobulins). The approval includes the use of tablets as well as a new oral suspension formulation of Revolade®, which is designed for younger children who may not be able to swallow tablets.

Kyprolis® (carfilzomib), an Amgen Product Utilizing Captisol

- On January 21, 2016, Amgen announced that FDA approved Kyprolis® (carfilzomib) in combination with dexamethasone for the treatment of patients with relapsed or refractory multiple myeloma who have received one to three lines of therapy. The FDA also approved Kyprolis® as a single agent for the treatment of patients with relapsed or refractory multiple myeloma who have received one or more lines of therapy, converting to full approval the initial accelerated approval Kyprolis® received in July 2012 as a single agent.
- On January 28, 2016, Amgen announced Health Canada approval of Kyprolis® (carfilzomib) in combination with lenalidomide and dexamethasone for the treatment of patients with relapsed multiple myeloma who have received one to three lines of therapy.

Additional Pipeline and Partner Developments

- Spectrum Pharmaceuticals received FDA approval of EVOMELA™ (melphalan) for use as a high-dose conditioning treatment prior to hematopoietic progenitor (stem) cell transplantation in patients with multiple myeloma, and for the palliative treatment of patients with multiple myeloma for whom oral therapy is not appropriate.
- Spectrum Pharmaceuticals announced that the FDA granted seven years of Orphan Drug Exclusivity for EVOMELA™ for use as a high-dose conditioning treatment prior to hematopoietic progenitor (stem) cell transplantation in patients with multiple myeloma.

Table of Contents

- Duavive® received EU pricing and was launched in Italy by Merck Sharp & Dohme, under license from Pfizer.
- Alvogen Inc. received approval from the FDA for Captisol-enabled IV voriconazole.
- Zydus Cadila announced the launch of Vivitra™, a biosimilar of trastuzumab, in India. Ligand gained rights to royalties on sales of Vivitra in the March 2013 Selexis royalty acquisition.
- Lundbeck announced the FDA accepted the resubmission of the NDA for IV carbamazepine. An action letter is anticipated before the end of 2016.
- Retrophin announced completion of enrollment in the Phase 2 DUET study of Sparsentan for the treatment of focal segmental glomerulosclerosis (FSGS). The DUET study exceeded its enrollment target of 100 patients, and top-line results are expected in the third quarter of 2016.
- Sage Therapeutics presented data that expanded scientific, clinical and burden-of-illness data for SAGE-547 at the 68th American Academy of Neurology Annual Meeting.
- Coherus BioSciences and Baxalta announced that CHS-0214, a proposed biosimilar of Enbrel® (etanercept) to which Ligand gained royalty rights in the March 2013 Selexis royalty acquisition, met its primary endpoint in a confirmatory, double-blind, randomized, controlled, two-part clinical study. This ongoing study is evaluating the efficacy and safety of CHS-0214 compared with Enbrel® in patients with moderate-to-severe rheumatoid arthritis that is inadequately controlled with methotrexate.
- Viking Therapeutics highlighted positive data from a Phase 1b trial of VK2809 (TR Beta) in subjects with mild hypercholesterolemia at the 65th Annual Scientific Session and Expo of the American College of Cardiology.
- Merrimack Pharmaceuticals presented data on MM-302, MM-141 and MM-151 at the 2016 American Association for Cancer Research Annual Meeting.
- Opthea Limited announced that the primary objective of safety in the dose-escalation phase of its ongoing first-in-human clinical trial of OPT-302, a novel VEGF-C/D 'Trap' therapy for wet age-related macular degeneration, had been met.
- Marinus Pharmaceuticals announced that the FDA granted Orphan Drug designation for ganaxolone IV for the treatment of status epilepticus. A Phase 1 clinical trial evaluating the safety, tolerability and pharmacokinetics of ganaxolone IV is expected to initiate in the first half of 2016.
- Marinus Pharmaceuticals presented preclinical data of ganaxolone IV, which showed robust activity in the model. The data were presented during an oral and poster presentations at the 68th American Academy of Neurology Annual Meeting.
- AVEO Oncology announced granting CANbridge Life Sciences worldwide rights, excluding the United States, Canada and Mexico, to AV-203, AVEO's clinical-stage ErbB3 (HER3) inhibitory antibody candidate.
- The journal *Nature* published an article highlighting the efficacy of Gilead's GS-5734 against the Ebola virus in rhesus monkeys.

New Licensing Deals

- Ligand announced a worldwide license agreement with Emergent BioSolutions that allows Emergent to use the OmniAb platform to discover fully human mono- and bispecific antibodies. Ligand is eligible to receive annual access payments, fees on patent filings, milestone payments and royalties on future net sales of any antibodies discovered under the license.
- Ligand announced a worldwide license agreement with Tizona Therapeutics that allows Tizona to use the OmniAb platform to discover fully human mono- and bispecific antibodies. Ligand is eligible to receive annual access payments, fees on patent filings, milestone payments and royalties on future net sales of any antibodies discovered under the license.
- Ligand announced a worldwide license agreement with ABBA Therapeutics that allows ABBA to use the OmniAb platform to discover fully human mono- and bispecific antibodies. Ligand is eligible to receive milestone payments and royalties on future net sales of any antibodies discovered under the license.
- Ligand entered into a Clinical Use Agreement with XTL Biopharmaceuticals to supply Captisol for use in the formulation of its lead drug, hCDR1, for the treatment of systemic lupus erythematosus. Under the terms of the agreement, Ligand is eligible to receive milestones and revenue from clinical Captisol sales.

Internal Glucagon Receptor Antagonist (GRA) Program

- Ligand scientists gave an oral presentation on GRA at ENDO 2016 and presented a poster at the Levine-Riggs Diabetes Research Symposium, which highlighted data from the Phase 1b trial demonstrating that GRA significantly reduced fasting and post-prandial glucose in subjects with type 2 diabetes.

The information in this report regarding certain third-party products and programs, including Promacta, a Novartis product and Kyprolis, an Amgen product, comes from information publicly released by the owners of such products and programs. Ligand is not responsible for, and has no role in, the development of such products or programs.

Results of Operations

Three months ended March 31, 2016 and 2015

Total revenues for the three months ended March 31, 2016 were \$29.6 million compared to \$14.6 million for the same period in 2015. We reported net income of \$6.6 million for the three months ended March 31, 2016 compared to \$0.8 million for the same period in 2015.

Royalty Revenue

Royalty revenues were \$14.4 million for the three months ended March 31, 2016 compared to \$10.3 million for the same period in 2015. The increase in royalty revenue is primarily due to an increase in Promacta and Kyprolis royalties.

Material Sales

We recorded material sales of \$5.3 million for the three months ended March 31, 2016 compared to \$3.7 million for the same period in 2015. The increase in material sales of \$1.6 million for the three months ended March 31, 2016 is due to an increase in Captisol purchases for use in clinical trials and in commercialized products.

License fees, milestones and other revenue

We recorded license fees, milestones and other revenue of \$9.9 million for the three months ended March 31, 2016 compared to \$0.6 million for the same period in 2015. The increase of \$9.3 million for the three months ended March 31, 2016 is primarily due to timing of significant milestones and upfront fees earned and the addition of the newly acquired OMT.

Cost of Sales

Cost of sales were \$1.0 million for the three months ended March 31, 2016 compared to \$1.1 million for the same period in 2015.

Amortization of intangibles

Amortization of intangible assets was \$2.5 million for the three months ended March 31, 2016 compared to \$0.6 million for the same period in 2015. The increase of \$1.9 million is due to the acquisition of OMT and the related amortization of definite lived intangible assets.

Research and Development Expenses

Research and development expenses were \$4.0 million for the three months ended March 31, 2016 compared to \$3.4 million for the same period in 2015. The increase of \$0.6 million for the three months ended March 31, 2016 is primarily due to stock based compensation expense.

We do not provide forward-looking estimates of costs and time to complete our ongoing research and development projects as such estimates would involve a high degree of uncertainty. Uncertainties include our inability to predict the outcome of complex research, our inability to predict the results of clinical studies, regulatory requirements placed upon us by regulatory authorities such as the FDA and EMA, our inability to predict the decisions of our collaborative partners, our ability to fund research and development programs, competition from other entities of which we may become aware in future periods, predictions of market potential from products that may be derived from our research and development efforts, and our ability to recruit and retain personnel or third-party research organizations with the necessary knowledge and skills to perform certain research. Refer to "Item 1A. Risk Factors" for additional discussion of the uncertainties surrounding our research and development initiatives.

General and Administrative Expenses

General and administrative expenses were \$6.8 million for the three months ended March 31, 2016 compared to \$6.0 million for the same period in 2015. The increase of \$0.9 million for the three months ended March 31, 2016 is primarily due to an increase in stock-based compensation expense and an increase in headcount related expenses.

Table of Contents

Lease Exit and Termination Costs

In September 2010, we ceased use of our facility located in Cranbury, New Jersey. As a result, during the three months ended September 30, 2010, we recorded lease exit costs of \$9.7 million for costs related to the difference between the remaining lease obligations of the abandoned operating leases, which run through August 2016, and management's estimate of potential future sublease income, discounted to present value. Actual future sublease income may differ materially from our estimate, which would result in us recording additional expense or reductions in expense. In addition, we wrote-off approximately \$5.4 million of property and equipment related to the facility closure and recorded approximately \$1.8 million of severance related costs. Lease exit and termination costs were \$0.2 million for the three months ended March 31, 2016 compared to \$0.2 million for the same period in 2015.

Interest Expense, net

Interest expense, net was \$3.0 million for the three months ended March 31, 2016 compared to \$3.0 million for the same period in 2015. The majority of interest expense and non-cash debt related costs are related to our 2019 Convertible Senior Notes.

Increase in Contingent Liabilities

We recorded an increase in contingent liabilities of \$1.3 million for the three months ended March 31, 2016 compared to an increase of \$3,000 for the same period in 2015. The increase for the three months ended March 31, 2016 primarily relates to an increase of \$1.1 million in the liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition and is further impacted by an increase of \$0.2 million in the liability for amounts potentially due to holders of CVRs related to our CyDex acquisition.

Income Tax Expense

We recorded income tax expense from continuing operations of \$3.7 million for the three months ended March 31, 2016 compared to income tax expense of \$15,000 for the same period in 2015. The income tax expense for the three months ended March 31, 2016 is based on the estimated annual effective tax rate of 39.7%.

Discontinued Operations

Oncology Product Line

In 2006, we entered into a purchase agreement with Eisai pursuant to which Eisai agreed to acquire our Oncology product line which included four marketed oncology drugs: ONTAK, Targretin capsules, Targretin gel and Panretin gel. Certain liabilities were recorded associated with the disposal of the product line. During the three months ended March 31, 2016 we recognized a \$1.1 million gain due to subsequent changes in certain estimates and liabilities previously recorded.

Income Taxes from Discontinued Operations

We recorded a provision for income taxes related to discontinued operations for the three months ended March 31, 2016 of \$0.4 million related to the gain recognized.

Liquidity and Capital Resources

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

We had net income of \$6.6 million for the quarter ended March 31, 2016. As of March 31, 2016, our cash, cash equivalents and marketable securities totaled \$113.2 million, and we had working capital of \$120.8 million with net long-term convertible debt of \$204.7 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,

Table of Contents

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, 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.

Borrowings and Other Liabilities

2019 Convertible Senior Notes

We have convertible debt outstanding as of March 31, 2016 related to our 2019 Convertible Senior Notes. In August 2014, we issued \$245.0 million aggregate principal amount of convertible senior unsecured notes. The 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. There were no repurchases during the three-month period ended March 31, 2016.

Contingent Liabilities

CyDex

In connection with the acquisition of CyDex in January 2011, we issued a series of CVRs and also assumed certain contingent liabilities. We may be required to make additional payments upon achievement of certain clinical and regulatory milestones to the CyDex shareholders and former license holders. In addition, we will pay CyDex shareholders, for each respective year through 2016, 20% of all CyDex-related revenue, but only to the extent that, and beginning only when, CyDex-related revenue for such year exceeds \$15.0 million; plus an additional 10% of all CyDex-related revenue recognized during such year, but only to the extent that, and beginning only when aggregate CyDex-related revenue for such year exceeds \$35.0 million. We have paid \$23.4 million to the CyDex shareholders for revenue sharing payments under the terms of the CVR agreement. The estimated fair value of the contingent liabilities recorded as part of the CyDex acquisition at March 31, 2016 was \$6.9 million, and as of December 31, 2015 was \$9.5 million.

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. We have paid \$2.6 million to the CyDex shareholders for revenue sharing payments under the terms of the CVR agreement. The fair value of the liability at March 31, 2016 was \$2.4 million, and as of December 31, 2015 was \$4.0 million.

Leases and Off-Balance Sheet Arrangements

We lease our office and research facilities under operating lease arrangements with varying terms through November 2019. The agreements provide for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases ranging from 3.0% to 3.5%. We also sublease a portion of our facilities through leases which expire between 2015 and 2023. The sublease agreements provide for a 3% increase in annual rents. We had no off-balance sheet arrangements at March 31, 2016 and December 31, 2015.

Table of Contents

Cash Flows

Operating Activities

Operating activities generated cash of \$13.1 million for the nine months ended March 31, 2016, compared to \$7.6 million for the same period in 2015.

The cash generated for the three months ended March 31, 2016 reflects net income of \$6.6 million, adjusted by \$16.3 million of non-cash items to reconcile net income to net cash generated from operations. These reconciling items primarily reflect stock-based compensation of \$4.1 million, amortization of debt discount and issuance fees of \$2.7 million, depreciation and amortization of \$2.6 million, loss on equity investment in Viking of \$1.6 million, realized gain on investments of \$0.4 million, \$1.3 million increase in the estimated fair value of contingent liabilities and deferred income taxes of \$4.1 million. The cash generated during the three months ended March 31, 2016 is further impacted by changes in operating assets and liabilities due primarily to an increase in accounts receivable of \$5.6 million, a decrease in accounts payable and accrued liabilities of \$4.3 million and an increase in inventory of \$0.9 million. Partially offsetting, cash generated for the period was impacted by a decrease in other current assets of \$16,000.

The cash generated for the three months ended March 31, 2015 reflects net loss of \$0.1 million, adjusted by \$6.5 million of non-cash items to reconcile net income to net cash generated from operations. These reconciling items primarily reflect stock-based compensation of \$2.9 million, amortization of debt discount and issuance fees of \$2.5 million, depreciation and amortization of \$0.7 million, and a realized loss on investments of \$0.4 million. The cash generated during the three months ended March 31, 2015 is further impacted by changes in operating assets and liabilities due primarily to a decrease in accounts receivable of \$5.2 million, a decrease in restricted cash of \$0.7 million, a decrease in other current assets of \$0.4 million, offset by a decrease in accounts payable and accrued liabilities of \$4.7 million, an increase in other long-term assets of \$0.3 million, and an increase in inventory of \$0.2 million (excluding \$2.4 million inventory purchased but not paid for at the period end).

Investing Activities

Investing activities used cash of \$79.8 million for the three months ended March 31, 2016, compared to \$2.8 million for the same period in 2015.

Cash used by investing activities during the three months ended March 31, 2016 primarily reflects the purchase of short-term investments of \$49.9 million, payments to CVR holders and other contingency payments of \$5.4 million, and cash paid to acquire OMT (net of cash acquired) of \$92.9 million, partially offset by proceeds from sales and maturity of short-term investments of \$20.3 million and \$48.4 million respectively.

Cash used by investing activities during the three months ended March 31, 2015 primarily reflects payments to CVR holders and other contingency payments of \$3.2 million, partially offset by proceeds from short-term investments of \$0.5 million.

Financing Activities

Financing activities provided cash of \$0.5 million for the three months ended March 31, 2016 and \$0.8 million for the same period in 2014.

Cash provided by financing activities for the three months ended March 31, 2016 reflects \$1.0 million of proceeds received from stock option exercises and our employee stock purchase plan, partially offset by \$0.5 million purchase of common stock for net settlement of RSUs vested and released during the quarter.

Cash provided by financing activities for the three months ended March 31, 2015 reflects \$0.8 million of proceeds received from stock option exercises and our employee stock purchase plan.

Table of Contents

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, 2016, our investment portfolio included investments in available-for-sale equity securities of \$81.9 million. These securities are subject to market risk and may decline in value based on market conditions.

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.

Table of Contents

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.

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, does not expect 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.

As described in Item 9A of Amendment No.1 to our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2015, we identified material weaknesses in our internal control over financial reporting related to:

(1) 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.

(2) the design of our internal control over the presentation and disclosure of our 2019 convertible senior notes, specifically, management review control is not precise and adequate to capture the appropriate presentation and disclosure of our 2019 convertible senior notes that is triggered by certain specific contractual conditions.

To remediate the material weakness described in bullet point (1) above and to prevent similar deficiencies in the future, we are currently evaluating additional controls and procedures, which may include:

- engagement of additional independent third party tax specialists to assist or review in the tax accounting for non-routine, complex transactions
- additional training for staff involved in the tax accounting for non-routine, complex transactions

With regards to the material weakness described in bullet point (2) above, subsequent to December 31, 2015, management has implemented additional controls and procedures related to management review of the presentation and disclosures of our 2019 convertible senior notes, which include:

- developed and refined certain spreadsheet tools to review various inputs including our stock price, which would trigger the early conversion conditions under the debt indenture agreement
- additional management review of the presentation including the classification of our 2019 convertible senior notes

Management will continue to strive to improve the respective process and controls over the presentation and disclosure of our convertible debt. However, the material weaknesses will not be considered remediated until the applicable remedial controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Table of Contents

Except for the changes mentioned above, there have not been any changes in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter of the fiscal year to which this report relates that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Table of Contents

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.

Paragraph IV Certification by Par Pharmaceuticals

On January 7, 2016, we received a paragraph IV certification from Par Sterile Products, LLC, a subsidiary of Par Pharmaceuticals, Inc., or 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 states it is Par's position 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 are invalid and/or will not be infringed by Par's manufacture, use or sale of the product for which the ANDA was submitted. On February 19, 2016, Merck filed an action against Par in the United States District Court for the District of New Jersey, asserting that Par's manufacture, use or sale of the product for which the ANDA was submitted would infringe Merck's U.S. Patent No. 9,023,790. The case against Par is captioned Merck Sharpe & Dohme Corp. v. Par Sterile Products, LLC, Par Pharmaceuticals, Inc., Par Pharmaceutical Companies, Inc., and Par Pharmaceutical Holdings, Inc., No.16-cv-00948.

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, 2015, as filed with the SEC on February 26, 2016:*

Future revenue based on Promacta and Kyprolis, 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 Duavee, Conbriza, Noxafil IV and Nexterone. Any setback that may occur with respect to any of our products, and in particular Promacta or Kyprolis, could significantly impair our operating results and/or reduce 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. Any such setback could reduce our revenue.

Future revenue from sales of Captisol material to our collaborative 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, as well as higher than expected total rebates, returns or discounts for such products.

If products or product candidates incorporating Captisol technology 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 market Captisol products 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, whether or not the adverse event was a result of Captisol, we could be required by the FDA to submit to additional regulatory reviews or approvals, including extensive safety testing or clinical testing of products using Captisol, which would be expensive and, even if we were to demonstrate that the adverse event was unrelated to Captisol, would 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 outlicensees to sell products using our Captisol technology. These agreements generally provide that outlicensees may terminate the agreements at will. If our outlicensees discontinue sales of products using our Captisol technology, fail to obtain regulatory approval for products using our Captisol technology, 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, financial condition, operating results and cash flows could be adversely affected.

Table of Contents

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 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 will expire by 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 outlicensees 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 collaborative partners' 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 us and our partners to obtain and maintain patents and other intellectual property rights for our and their potential products both in the United States and in foreign countries. Our patent position, like that of many biotechnology and pharmaceutical companies, is uncertain and involves complex legal and technical questions for which important 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. If Par succeeds in receiving the ANDA, we could lose the revenues related to NOXAFIL-IV or the ability to enter into new licenses using our '077 Patent. For additional information, see "Item 1. Legal Proceedings."

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 collaborative partners and could adversely affect our ability to enter into new collaborations. We also rely on unpatented trade secrets and know-how to protect and maintain our competitive position. We require our employees, consultants, collaborative partners 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 collaborative relationships, and any disputes or litigation with our collaborative 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.

Table of Contents

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. 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. 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 collaborative partners have rights to control product development and clinical programs for products developed under our collaborations. As a result, these collaborative partners may conduct these programs more slowly or in a different manner than expected. Moreover, even if clinical trials are completed, we or our collaborative 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 royalties and milestones from our partners in various past and future collaborations 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 been tested in clinical trials.

None of our collaboration partners using our OmniAb antibody platform have tested drugs based on the platform in 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 and the Trianni mouse. 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.

Table of Contents

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 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. The Obama administration has 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. Yet, there is no guarantee that the current 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

Table of Contents

supplier of Captisol, to be charged with violations of Federal laws which may result in significant legal expenses and substantial penalties and fines.

We have restated prior consolidated financial statements, which may lead to additional risks and uncertainties, including 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 as described in *Restated Financials* in "Note 1 Summary of significant accounting policies" to the condensed consolidated financial statements (the Restatement). For a description of the material weaknesses in our internal control over financial reporting identified by management in connection with the Restatement and management's plan to remediate those material weaknesses, 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.

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

As described in "Part II, Item 9A - Controls and Procedures." of amended Annual Report on Form 10-K/A for the year ended December 31, 2015, management identified control deficiencies that represent material weaknesses. 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 identified material weaknesses, management has concluded that we did not maintain effective internal control over financial reporting as of December 31, 2015. See "Part II, Item 9A - Controls and Procedures." of our amended Annual Report on Form 10-K/A for the year ended December 31, 2015.

We are developing and implementing a remediation plan to address the material weaknesses. 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.

Our shareholder rights plan, concentration of ownership and charter documents may hinder or prevent change of control transactions.

Our shareholder rights plan and 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. We have in the past granted waivers to investors allowing them to increase their ownership level above the limit set forth in our shareholder rights agreement. Such restrictions, circumstances 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 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 collaborative 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

Table of Contents

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, Pharmacoepia, and Neurogen 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 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.

Table of Contents

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: November 14, 2016

By: /s/ Matthew Korenberg

Matthew Korenberg

Vice President, Finance and Chief Financial Officer

Duly Authorized Officer and Principal Financial Officer

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
10.1	Second Amendment to the Loan and Security Agreement, dated January 22, 2016 by and among the Company and Viking Therapeutics, Inc.
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

SECOND AMENDMENT TO LOAN AND SECURITY AGREEMENT

THIS SECOND AMENDMENT TO LOAN AND SECURITY AGREEMENT, dated as of January 22, 2016 (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, by and between Borrower and Lender (the “**Agreement**”) pursuant to Section 25(c) of the Agreement as follows:

1. Definitions.

(a) The definition of “Borrower Equity” in Schedule A to the Agreement is amended and restated to read in its entirety as follows:

“**Borrower Equity**” means: (i) with respect to the Next Financing, the New Preferred, Common Stock and/or other equity securities of Borrower to be issued by Borrower in the Next Financing, or (ii) with respect to any prepayment made pursuant to Section 2(e)(i) through the issuance of securities of Borrower, Common Stock.”

(b) The definition of “Borrower Securities” in Schedule A to the Agreement is amended and restated to read in its entirety as follows:

“**Borrower Securities**” means the Borrower Equity Securities.”

(c) 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, 2017.”

(d) The following definition is hereby added to Schedule A:

“**Common Stock**” means Borrower’s common stock, par value \$0.00001 per share.”

2. Conversion, Prepayment. Section 2(c) of the Agreement shall be amended and restated to read in its entirety as follows:

“(c) Conversion of Loans Upon Next Financing.

(i) Upon the consummation of the first bona fide capital financing transaction or series of financing transactions of Borrower occurring after January 22, 2016 but prior to the Maturity Date with aggregate net proceeds to Borrower of at least \$2,000,000 pursuant to which Borrower issues any shares of the New Preferred, Common Stock and/or other equity securities of Borrower (the “**Next Financing**”), Borrower shall repay to Lender \$1,500,000, which payment shall be comprised of at least \$300,000 in cash (with any greater cash amount determined by Borrower in its sole and absolute discretion), with the balance of the \$1,500,000 that is not paid in cash (the “**Balance**”) to be paid in the form of that number of fully paid and nonassessable shares

of Borrower Equity as is equal to the quotient obtained by dividing the Balance by the lesser of (a) the lowest per share price paid by investors in the Next Financing, and (b) \$8.00 (as adjusted for any and all stock dividends, stock splits, stock combinations or other similar transactions occurring after the date hereof), rounded down to the nearest whole share (the “**Initial Payment**”); provided, however, that if the number of shares of Borrower Equity to be included in the Initial Payment, plus any shares of Common Stock that Lender beneficially owns as of immediately after the Next Financing, will, after giving effect to any shares of Common Stock issued in connection with the Next Financing and the issuance of any shares of Common Stock included in the Initial Payment Amount, result in Lender beneficially owning in excess of 49.90% of Borrower’s outstanding Common Stock (the “**Ownership Cap**”), then the number of shares of Borrower Equity included in the Initial Payment shall be reduced by a number of shares which results in Lender not exceeding the Ownership Cap, and the remaining amount of the Initial Payment shall be paid in cash. The Initial Payment shall be applied, first, to accrued and unpaid interest on the Loans and, second, to the unpaid principal amount of the Loans. Each \$1.00 of value of the Initial Payment shall reduce the amount of accrued and unpaid interest and then unpaid principal amount on the Loans by \$0.50.”

(ii) [Intentionally Omitted.]”

3. Notice to Lender. Section 2(d)(i) of the Agreement shall be amended and restated to read in its entirety as follows:

“(d) (i) [Intentionally Omitted.]”

4. Stock Certificates. Section 2(d)(ii) of the Agreement shall be amended and restated to read in its entirety as follows:

“(d) (ii) Stock Certificates. Borrower shall, as soon as practicable following consummation of the Next Financing where Borrower is required to issue Borrower Securities, issue and deliver to Lender, or to its nominee or nominees, a certificate or certificates for the number of shares of Borrower Securities to which it shall be entitled as aforesaid. Such conversion shall be deemed to have been made, as applicable, immediately prior to the close of business on the date of the closing of the Next Financing. The person or persons entitled to receive the Borrower Securities issuable upon such conversion shall be treated for all purposes as the record holders of such Borrower Securities on such date.”

5. Optional Prepayment; Repayment. Section 2(e) of the Agreement shall be amended and restated to read in its entirety as follows:

“(e) Optional Prepayment; Repayment.

(i) Optional Prepayment in Part. In addition to the payment of cash and issuance of shares of Borrower Equity to Lender in accordance with Section 2(c), Borrower may at any time after the Next Financing or from time to time after the Next Financing prepay any portion of the outstanding principal amount of the Loans, plus accrued and previously unpaid interest thereon (each such portion, an “**Additional Payment Amount**”) by delivering to Lender a written notice specifying the Additional Payment Amount that Borrower elects to prepay (the “**Additional**

Payment Notice”). Lender shall have a period of five (5) days following receipt of the Additional Payment Notice to elect, at its sole election and discretion, by delivering an irrevocable writing delivered to Borrower (the “**Lender Election Notice**”), (a) to receive that number of fully paid and nonassessable shares of Borrower Equity as is equal to the quotient obtained by dividing the Additional Payment Amount by the lesser of (1) (x) if the Additional Payment Notice is delivered to Lender within 180 days of the closing date of the Next Financing, the lowest per share price paid by investors in the Next Financing, or (y) if the Additional Payment Notice is delivered to Lender 180 days or more after the closing date of the Next Financing, the volume weighted average closing price of the Common Stock, as reported by The Nasdaq Stock Market LLC, for the thirty (30) consecutive trading days ending on the last trading date immediately preceding the date that the Additional Payment Notice is delivered to Lender, and (2) \$8.00 (as adjusted for any and all stock dividends, stock splits, stock combinations or other similar transactions occurring after the date hereof), rounded down to the nearest whole share, (b) to require Borrower to prepay the Additional Payment Amount in cash, or (c) to receive a combination of shares under clause (a) and cash under clause (b) up to the aggregate value of the Additional Payment Amount. Notwithstanding the foregoing, if Lender does not deliver the Lender Election Notice to Borrower within five (5) days of Lender’s receipt of the Additional Payment Notice with respect to an Additional Payment Amount, then the form of payment and mix of cash and Borrower Securities for such Additional Payment shall be at Borrower’s sole election and discretion; provided, however, that if the number of shares of Borrower Equity to be included in an Additional Payment Amount, plus any shares of Common Stock that Lender beneficially owns as of immediately prior to the payment of the Additional Payment Amount, will, after giving effect to the issuance of any shares of Common Stock included in the Additional Payment Amount, result in Lender beneficially owning shares of Common Stock in excess of the Ownership Cap, then the number of shares of Borrower Equity included in such Additional Payment Amount shall be reduced by a number of shares which results in Lender not exceeding the Ownership Cap, and the remaining Additional Payment Amount shall be paid in cash. Each additional payment made by Borrower to Lender pursuant to this Section 2(e)(i) (each, an “**Additional Payment**”) shall be applied, first, to accrued and unpaid interest on the Loans and, second, to the unpaid principal amount of the Loan. Each \$1.00 of value of each Additional Payment shall reduce the amount of accrued and unpaid interest and then unpaid principal amount on the Loans by \$0.50.

(ii) Repayment; Prepayment in Full. If: (a) the Loans are not fully repaid prior to the Maturity Date, the remaining Loans will automatically mature and an amount equal to 200% of the aggregate of the principal amount of the Loans then outstanding and of all accrued and unpaid interest thereon (the “**Remaining Balance**”), shall be due and payable (or issuable with respect to Borrower Securities) upon written demand by Lender, which demand may be made at any time on or after the Maturity Date, or (b) Borrower elects to prepay the remaining Loans in full prior to the Maturity Date, Borrower shall be required to pay to Lender (or issue Borrower Securities) an amount equal to the Remaining Balance, as follows: (I) the issuance to Lender of such number of fully paid and nonassessable shares of Borrower Securities as is equal to the quotient obtained by dividing the Remaining Balance by the lesser of (A) the volume weighted average closing price of the Common Stock, as reported by The Nasdaq Stock Market LLC, for the thirty (30) consecutive trading days ending on the last trading date immediately preceding the date of Lender’s written demand for repayment or the date of Borrower’s prepayment in full, as applicable, and (B) \$8.00

(as adjusted for any and all stock dividends, stock splits, stock combinations or other similar transactions occurring after the date hereof), rounded down to the nearest whole share, (II) the entire Remaining Balance in cash, or (III) a combination of shares under clause (I) and cash under clause (II) up to the aggregate value of the Remaining Balance (provided that Borrower may, at its sole election and discretion, elect to pay the entire Remaining Balance solely in cash and provided further, that if Borrower does not so elect to pay the entire Remaining Balance solely in cash, the form of payment and mix of cash and Borrower Securities shall be at Lender's sole election and discretion).

6. Interest Rate. The reference to "five percent (5.0%)" in Section 2(f) of the Agreement shall be replaced with "two and a half percent (2.5%)".

7. Lock-Up Period. The first sentence of Section 13 of the Agreement shall be amended and restated to read in its entirety as follows:

"The original Lender hereby agrees that it shall not, prior to January 23, 2017 (the "**Lock-Up Period**"), directly or indirectly, sell or otherwise transfer or dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock then or thereafter owned either of record or beneficially (as defined in the Securities Exchange Act of 1934, as amended) by the original Lender."

8. Each of the following defined terms and definitions set forth in Schedule A to the Agreement shall be deleted: "Equity Financing"; "Qualified Follow-on Public Offering" and "Qualified Private Financing".

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

10. 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.

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IN WITNESS WHEREOF, the parties hereto have caused this Second 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, Ph.D.

Name: Brian Lian, Ph.D.

Title: President and Chief Executive Officer

LENDER:

LIGAND PHARMACEUTICALS INCORPORATED

By: /s/ Charles Berkman

Name: Charles Berkman

Title: VP, General Counsel & Secretary

[Signature Page to Second Amendment to Loan and Security Agreement]

**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/A 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: November 14, 2016

**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**

/s/ John L. Higgins

John L. Higgins

Chief Executive Officer

(Principal Executive Officer)

**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/A 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: November 14, 2016

/s/ Matthew Korenberg

Matthew Korenberg

Vice President, Finance and Chief Financial Officer

(Principal Financial Officer)

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q/A for the quarter ended March 31, 2016, 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: November 14, 2016

/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/A for the quarter ended March 31, 2016, 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: November 14, 2016

/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.