

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

---

**FORM 10-Q**

---

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

**For the quarterly period ended June 30, 2015**

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)

**11119 North Torrey Pines Road, Suite 200**

**La Jolla, CA**

(Address of principal executive offices)

**77-0160744**

(I.R.S. Employer  
Identification No.)

**92037**

(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

Accelerated Filer

Non-Accelerated Filer  (Do not check if a smaller reporting company)

Smaller Reporting Company

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

As of August 1, 2015, the registrant had 19,854,830 shares of common stock outstanding.

---

**LIGAND PHARMACEUTICALS INCORPORATED  
QUARTERLY REPORT**

**FORM 10-Q**

**TABLE OF CONTENTS**

**PART I. FINANCIAL INFORMATION**

<a href="#">ITEM 1. Financial Statements</a>	<a href="#">3</a>
<a href="#">Condensed Consolidated Balance Sheets as of June 30, 2015 and December 31, 2014 (Unaudited)</a>	<a href="#">3</a>
<a href="#">Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2015 and 2014 (Unaudited)</a>	<a href="#">4</a>
<a href="#">Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and six months ended June 30, 2015 and 2014 (Unaudited)</a>	<a href="#">5</a>
<a href="#">Condensed Consolidated Statements of Cash Flows for the three and six months ended June 30, 2015 and 2014 (Unaudited)</a>	<a href="#">6</a>
<a href="#">Notes to Condensed Consolidated Financial Statements (Unaudited)</a>	<a href="#">8</a>
<a href="#">ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</a>	<a href="#">28</a>
<a href="#">ITEM 3. Quantitative and Qualitative Disclosures about Market Risk</a>	<a href="#">36</a>
<a href="#">ITEM 4. Controls and Procedures</a>	<a href="#">37</a>

**PART II. OTHER INFORMATION**

<a href="#">ITEM 1. Legal Proceedings</a>	<a href="#">38</a>
<a href="#">ITEM 1A. Risk Factors</a>	<a href="#">39</a>
<a href="#">ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds</a>	<a href="#">48</a>
<a href="#">ITEM 3. Defaults Upon Senior Securities</a>	<a href="#">48</a>
<a href="#">ITEM 4. Mine Safety Disclosures</a>	<a href="#">48</a>
<a href="#">ITEM 5. Other Information</a>	<a href="#">48</a>
<a href="#">ITEM 6. Exhibits</a>	<a href="#">48</a>
<a href="#">SIGNATURE</a>	<a href="#">49</a>

---

[Table of Contents](#)**PART I. FINANCIAL INFORMATION****ITEM 1. FINANCIAL STATEMENTS****LIGAND PHARMACEUTICALS INCORPORATED**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
(Unaudited, in thousands, except share data)

	June 30, 2015	December 31, 2014
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 108,238	\$ 160,203
Short-term investments	73,371	7,133
Accounts receivable	5,532	12,634
Note receivable	5,547	—
Inventory	802	269
Capitalized expenses (Viking IPO)	—	2,268
Current debt issuance costs	834	809
Restricted investments	600	1,261
Other current assets	1,801	1,842
Total current assets	196,725	186,419
Property and equipment, net	405	486
Investment in Viking Therapeutics	33,996	—
Intangible assets, net	49,535	50,723
Goodwill	12,238	12,238
Commercial license rights	8,598	4,568
Long-term debt issuance costs	2,964	3,388
Other assets	301	207
Total assets	\$ 304,762	\$ 258,029
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable (including \$0 and \$2,211 related to a VIE, respectively)	\$ 2,708	\$ 7,698
Accrued liabilities	5,629	4,866
Current contingent liabilities	7,674	6,796
Current lease exit obligations	1,638	2,356
Other current liabilities	300	1,063
Total current liabilities	17,949	22,779
Long-term deferred revenue, net	2,083	2,085
Long-term lease exit obligations	228	934
Deferred income taxes	3,059	2,792
Long-term contingent liabilities	11,089	8,353
Long-term debt, net	200,567	195,908
Other long-term liabilities	734	770
Total liabilities	235,709	233,621
Commitments and Contingencies		
Stockholders' equity:		
Common stock, \$0.001 par value; 33,333,333 shares authorized; 19,837,109 and 19,575,150 shares issued and outstanding at June 30, 2015 and December 31, 2014, respectively	20	20
Additional paid-in capital	692,765	680,660
Accumulated other comprehensive income	11,265	4,953
Accumulated deficit	(634,997)	(659,315)
Total stockholders' equity attributable to Ligand Pharmaceuticals	69,053	26,318
Noncontrolling interests	—	(1,910)
Total liabilities and stockholders' equity	\$ 304,762	\$ 258,029

*See accompanying notes.*

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

	Three months ended		Six months ended	
	June 30,		June 30,	
	2015	2014	2015	2014
<b>Revenues:</b>				
Royalties	\$ 6,606	\$ 5,241	\$ 16,893	\$ 13,091
Material sales	10,681	3,476	14,410	9,191
Collaborative research and development and other revenues	1,131	1,891	1,717	4,284
Total revenues	<u>18,418</u>	<u>10,608</u>	<u>33,020</u>	<u>26,566</u>
<b>Operating costs and expenses:</b>				
Cost of goods	2,600	1,186	3,673	3,637
Research and development	4,010	2,689	7,972	5,821
General and administrative	7,225	5,239	13,219	10,310
Lease exit and termination costs	218	136	441	340
Total operating costs and expenses	<u>14,053</u>	<u>9,250</u>	<u>25,305</u>	<u>20,108</u>
Income from operations	<u>4,365</u>	<u>1,358</u>	<u>7,715</u>	<u>6,458</u>
<b>Other (expense) income:</b>				
Interest expense, net	(2,969)	(181)	(5,945)	(429)
Increase in contingent liabilities	(7,274)	(1,312)	(7,277)	(3,260)
Gain on deconsolidation of Viking Therapeutics	28,190	—	28,190	—
Equity in net losses from Viking Therapeutics	(870)	—	(870)	—
Other, net	850	1,376	404	621
Total other (expense) income, net	<u>17,927</u>	<u>(117)</u>	<u>14,502</u>	<u>(3,068)</u>
Income before income taxes	22,292	1,241	22,217	3,390
Income tax (expense) benefit	(265)	47	(279)	(6)
Net income including noncontrolling interests:	<u>22,027</u>	<u>1,288</u>	<u>21,938</u>	<u>3,384</u>
Less: Net loss attributable to noncontrolling interests	<u>(1,537)</u>	<u>(304)</u>	<u>(2,380)</u>	<u>(304)</u>
Net income	<u>\$ 23,564</u>	<u>\$ 1,592</u>	<u>\$ 24,318</u>	<u>\$ 3,688</u>
<b>Per share amounts attributable to Ligand common shareholders:</b>				
Basic net income per share	\$ 1.19	\$ 0.08	\$ 1.24	\$ 0.18
Diluted net income per share	\$ 1.11	\$ 0.07	\$ 1.16	\$ 0.17
Weighted-average number of common shares-basic	19,725,410	20,738,299	19,668,183	20,668,110
Weighted-average number of common shares-diluted	21,276,404	21,780,034	20,953,134	21,776,125

*See accompanying notes.*

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

	Three months ended		Six months ended	
	June 30,		June 30,	
	2015	2014	2015	2014
Net income	\$ 23,564	\$ 1,592	\$ 24,318	\$ 3,688
Unrealized net gain (loss) on available-for-sale securities, net of tax of \$0	3,230	(5,127)	7,844	3,095
Less: Reclassification of net realized gains included in net income	(1,300)	(774)	(1,533)	(968)
Comprehensive income (loss)	\$ 25,494	\$ (4,309)	\$ 30,629	\$ 5,815

*See accompanying notes.*

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

	Six months ended	
	June 30,	
	2015	2014
<b>Operating activities</b>		
Net income including noncontrolling interests	\$ 21,938	\$ 3,384
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	7,277	3,261
Realized gain on sale of short-term investment	(502)	(968)
Gain on write-off of assets	—	(16)
Depreciation and amortization	1,296	1,337
Amortization of discount on investments, net	(34)	—
Amortization of debt discount and issuance fees	5,058	—
Stock-based compensation	6,675	5,093
Non-cash upfront fee	—	(1,211)
Deferred income taxes	268	6
Accretion of note payable	16	169
Gain on deconsolidation of Viking Therapeutics, Inc.	(28,190)	—
Loss on equity investment in Viking Therapeutics, Inc.	870	—
Changes in operating assets and liabilities:		
Accounts receivable	7,102	(911)
Inventory	(533)	575
Other current assets	(462)	(136)
Other long-term assets	(598)	(231)
Accounts payable and accrued liabilities	(3,107)	(3,743)
Restricted investments	661	—
Deferred revenue	(110)	(24)
Net cash provided by operating activities	<u>17,625</u>	<u>6,585</u>
<b>Investing activities</b>		
Purchase of commercial license rights	(4,030)	—
Payments to CVR holders and other contingency payments	(3,663)	(1,668)
Purchases of property and equipment	(27)	—
Purchase of short-term investments	(60,432)	—
Purchase of Viking common stock	(9,000)	—
Proceeds from sale of property and equipment	1	125
Reduction of cash due to deconsolidation of Viking Therapeutics, Inc.	(247)	—
Proceeds from sale of short-term investments	2,378	1,155
Other, net	—	(1)
Net cash used in investing activities	<u>(75,020)</u>	<u>(389)</u>
<b>Financing activities</b>		
Repayment of debt	—	(6,947)
Net proceeds from stock option exercises and ESPP	5,430	3,648
Net cash provided by (used in) financing activities	<u>5,430</u>	<u>(3,299)</u>
Net (decrease) increase in cash and cash equivalents	(51,965)	2,897
Cash and cash equivalents at beginning of period	160,203	11,639
Cash and cash equivalents at end of period	<u>\$ 108,238</u>	<u>\$ 14,536</u>
<b>Supplemental disclosure of cash flow information</b>		
Interest paid	\$ 903	\$ 212
Taxes paid	\$ 13	\$ 3
<b>Supplemental schedule of non-cash activity</b>		
Unrealized gain on AFS investments	\$ 7,844	\$ 3,095

[Table of Contents](#)

*See accompanying notes*

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

**1. Basis of Presentation**

Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company" or "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. By diversifying the portfolio of assets across numerous technology types, therapeutic areas, drug targets, and industry partners, the Company offers investors an opportunity to invest in the increasingly complicated and unpredictable pharmaceutical industry. 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, focal segmental glomerulosclerosis ("FSGS"), menopausal symptoms and osteoporosis. Ligand has established multiple alliances with the world's leading pharmaceutical companies including Novartis, Amgen, Merck, Pfizer, Baxter International, and Eli Lilly. The Company's principal market is the United States. The Company sold its Oncology Product Line ("Oncology") and Avinza Product Line ("Avinza") on October 25, 2006 and February 26, 2007, respectively. The operating results for Oncology and Avinza have been presented in the accompanying condensed consolidated financial statements as "Discontinued Operations."

*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 June 30, 2015 and for the three and six months ended June 30, 2015 and 2014 have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States for annual financial statements. The Company's unaudited condensed consolidated balance sheet at December 31, 2014 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by accounting principles generally accepted in the United States for complete financial statements. 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 and six months ended June 30, 2015 are not necessarily indicative of the results that may be expected for the year ending December 31, 2015. These financial statements should be read in conjunction with the consolidated financial statements and notes therein included in the Company's annual report on Form 10-K for the year ended December 31, 2014.

*Use of Estimates*

The preparation of condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States requires the use of estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses, contingent assets and liabilities, definite and indefinite lived intangible assets, goodwill, co-promote termination payments receivable and co-promote termination liabilities, uncertain tax positions, deferred revenue, lease exit liability and income tax net operating loss carryforwards during the reporting period. The Company's critical accounting policies are those that are both most important to the Company's financial condition and results of operations and require the most difficult, subjective or complex judgments on the part of management in their application, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Because of the uncertainty of factors surrounding the estimates or judgments used in the preparation of the condensed consolidated financial statements, actual results may materially vary from these estimates.

## Table of Contents

### *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 potential 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 0.4 million, as of June 30, 2015 and 2014, respectively.

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

	Three months ended		Six months ended	
	June 30,		June 30,	
	2015	2014	2015	2014
Net income	\$ 23,564	\$ 1,592	\$ 24,318	\$ 3,688
Shares used to compute basic income per share	19,725,410	20,738,299	19,668,183	20,668,110
Dilutive potential common shares:				
Restricted stock	42,836	29,029	52,187	44,815
Stock options	1,044,926	1,012,706	1,001,147	1,063,200
0.75% Convertible Senior Notes, Due 2019	463,232	—	231,617	—
Shares used to compute diluted income per share	21,276,404	21,780,034	20,953,134	21,776,125
Basic per share amounts:				
Net income	\$ 1.19	\$ 0.08	\$ 1.24	\$ 0.18
Diluted per share amounts:				
Net income	\$ 1.11	\$ 0.07	\$ 1.16	\$ 0.17

### *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 investment 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.

## Table of Contents

### *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 June 30, 2015 and December 31, 2014 (in thousands):

	<u>Amortized cost</u>	<u>Gross unrealized gains</u>	<u>Gross unrealized losses</u>	<u>Estimated fair value</u>
<b>June 30, 2015</b>				
Short-term investments				
Bank deposits	\$ 38,174	\$ 3	\$ (3)	\$ 38,174
Corporate bonds	5,115	—	(5)	5,110
Commercial paper	3,498	—	—	3,498
Asset backed securities	13,330	—	(3)	13,327
Corporate equity securities	1,988	11,274	—	13,262
Restricted investments	600	—	—	600
	<u>\$ 62,705</u>	<u>\$ 11,277</u>	<u>\$ (11)</u>	<u>\$ 73,971</u>
<b>December 31, 2014</b>				
Short-term investments				
Corporate equity securities	2,179	4,954	—	7,133
Restricted investments	1,261	—	—	1,261
	<u>\$ 3,440</u>	<u>\$ 4,954</u>	<u>\$ —</u>	<u>\$ 8,394</u>

### *Concentrations of Credit Risk*

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash equivalents, investments and accounts receivable.

The Company invests its excess cash principally in U.S. government debt securities, investment-grade corporate debt securities and certificates of deposit. The Company has 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. The Company did not experience any significant losses on its cash equivalents, short-term investments or restricted investments for either of the periods ending June 30, 2015 and December 31, 2014.

Accounts receivable were \$5.5 million and 88% was due from one customer at June 30, 2015. Accounts receivable were \$12.6 million and 64% was due from two customers at December 31, 2014.

The Company currently obtains Captisol material from multiple sites from a single supplier, Hovione. If Hovione were not able to supply the requested amounts of Captisol and the Company's existing inventory was depleted, the Company would be unable to continue to derive revenues from the sale of Captisol until it obtained an alternative source, which might take considerable time. The Company maintains inventory of Captisol, which has a five year shelf life, at three geographically spread storage locations in the United States and Europe. If a disaster were to strike any of these locations, it could lead to supply interruptions for some customers.

### *Inventory*

Inventory is stated at the lower of cost or market value. The Company determines cost using the first-in, first-out method. The Company analyzes its inventory levels periodically and writes down inventory 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 and six months ended June 30, 2015 and 2014.

## Table of Contents

### *Allowance for Doubtful Accounts*

The Company maintains an allowance for doubtful accounts based on the best estimate of the amount of probable losses in the Company's existing accounts receivable. Accounts receivable that are outstanding longer than their contractual payment terms, ranging from 30 to 90 days, are considered past due. When determining the allowance for doubtful accounts, several factors are taken into consideration, including historical write-off experience and review of specific customer accounts for collectability. Account balances are charged off against the allowance after collection efforts have been exhausted and the potential for recovery is considered remote. There was no allowance for doubtful accounts included in the balance sheets at June 30, 2015 and December 31, 2014.

### *Property and Equipment*

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

	June 30, 2015	December 31, 2014
Lab and office equipment	\$ 2,182	\$ 2,232
Leasehold improvements	273	273
Computer equipment and software	632	624
	3,087	3,129
Less accumulated depreciation and amortization	(2,682)	(2,643)
Total property and equipment, net	\$ 405	\$ 486

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 their estimated useful lives or their related lease term, whichever is shorter. Depreciation expense was recognized for each of the three and six months ended June 30, 2015 and 2014 of \$0.1 million and \$0.1 million, respectively. Depreciation expense is included in operating expenses.

### *Goodwill and Other Identifiable Intangible Assets*

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

	June 30, 2015	December 31, 2014
Indefinite lived intangible assets		
Acquired in-process research and development	\$ 12,556	\$ 12,556
Goodwill	12,238	12,238
Definite lived intangible assets		
Complete technology	15,267	15,267
Less: Accumulated amortization	(3,380)	(2,999)
Trade name	2,642	2,642
Less: Accumulated amortization	(586)	(519)
Customer relationships	29,600	29,600
Less: Accumulated amortization	(6,564)	(5,824)
Total goodwill and other identifiable intangible assets, net	\$ 61,773	\$ 62,961

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 \$0.6 million and \$1.2 million was recognized for each of the three and six months ended June 30, 2015 and 2014, respectively. Estimated amortization expense for the years ending December 31, 2015 through 2019 is \$2.4 million per year.

## Table of Contents

The Company accounts for goodwill and other intangible assets in accordance with Accounting Standards Codification ("ASC") Topic 350 - *Intangibles - Goodwill and Other* which, among other things, establishes standards for goodwill acquired in a business combination, eliminates the amortization of goodwill and requires the carrying value of goodwill and certain non-amortizing intangibles to be evaluated for impairment on an annual basis. The Company uses the income approach and the market approach, each weighted at 50%, when performing its goodwill impairment analysis. For the income approach, the Company considers the present value of future cash flows and the carrying value of its assets and liabilities, including goodwill. The market approach is based on an analysis of revenue multiples of peer public companies. If the carrying value of the assets and liabilities, including goodwill, were to exceed the Company's estimation of the fair value, the Company would record an impairment charge in an amount equal to the excess of the carrying value of goodwill over the implied fair value of the goodwill. The Company performs an evaluation of goodwill and other intangibles as of December 31 of each year, absent any indicators of earlier impairment, to ensure that impairment charges, if applicable, are reflected in the Company's financial results before December 31 of each year. When it is determined that impairment has occurred, a charge to operations is recorded. Goodwill and other intangible asset balances are included in the identifiable assets of the business segment to which they have been assigned. Any goodwill impairment, as well as the amortization of other purchased intangible assets, is charged against the respective business segments' operating income. For each of the three and six months ended June 30, 2015 and 2014, there was no impairment of goodwill.

### *Acquired In-Process Research and Development*

Intangible assets related to acquired in-process research and development ("IPR&D") are considered to be indefinite-lived until the completion or abandonment of the associated research and development efforts. During the period the assets are considered to be indefinite-lived, they will not be amortized but will be tested for impairment on an annual basis and between annual tests if the Company becomes aware of any events occurring or changes in circumstances that would indicate a reduction in the fair value of the IPR&D projects below their respective carrying amounts. If and when development is complete, which generally occurs if and when regulatory approval to market a product is obtained, the associated assets would be deemed definite-lived and would then be amortized based on their respective estimated useful lives at that point in time. For each of the three and six months ended June 30, 2015 and 2014, there was no impairment of IPR&D.

### *Commercial license rights*

Commercial license rights represent a portfolio of future milestone and royalty payment rights acquired in accordance with two Royalty Stream and Milestone Payments Purchase Agreements entered into with Selexis SA ("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 June 30, 2015, 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.

### *Other Current Assets*

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

	June 30, 2015	December 31, 2014
Prepaid expenses	\$ 1,206	\$ 835
Other receivables	595	685
Co-promote receivable	—	322
Total other current assets	\$ 1,801	\$ 1,842

### *Investment in Viking Therapeutics*

Beginning May 2015, the Company deconsolidated a previously reported variable interest entity ("VIE"). The Company elected to record its investment in Viking Therapeutics ("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,

## Table of Contents

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, Inc.*, for additional details.

### *Accrued Liabilities*

Accrued liabilities consist of the following (in thousands):

	June 30, 2015	December 31, 2014
Compensation	\$ 1,399	\$ 1,708
Professional fees	545	459
Amounts owed to former licensees	1,960	925
Royalties owed to third parties	634	705
Other	1,091	1,069
Total accrued liabilities	<u>\$ 5,629</u>	<u>\$ 4,866</u>

### *Other Long-Term Liabilities*

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

	June 30, 2015	December 31, 2014
Deposits	\$ 396	\$ 411
Deferred rent	306	327
Other	32	32
Total other long-term liabilities	<u>\$ 734</u>	<u>\$ 770</u>

### *Contingent Liabilities*

In connection with the Company's acquisition of CyDex in January 2011, the Company recorded a \$17.6 million contingent liability, inclusive of the \$4.3 million payment made in January 2012, for amounts potentially due to holders of the CyDex contingent value rights ("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 June 30, 2015 and December 31, 2014 was \$10.4 million and \$11.5 million, respectively. The Company recorded a fair-value adjustment to increase the liability by \$1.0 million and \$2.2 million for the three and six months ended June 30, 2015, respectively. There was a revenue-sharing payment of \$3.2 million during the six months ended June 30, 2015. For the three and six months ended June 30, 2014, the Company recorded a fair-value adjustment to increase the liability by \$3.2 million and \$2.7 million, respectively. There was a revenue-sharing payment of \$1.6 million made during the six months ended June 30, 2014.

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. Changes in the fair values are reported in the statement of operations as income (decreases) or expense (increases). 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 \$8.4 million and \$3.7 million as of June 30, 2015 and December 31, 2014, respectively. The Company recorded an increase in the liability for

## Table of Contents

Metabasis-related CVRs of \$6.4 million and \$5.3 million for the three and six months ended June 30, 2015, respectively. The Company recorded a decrease in the liability for Metabasis-related CVRs of \$1.9 million and an increase in the liability of \$0.5 million for the three and six months ended June 30, 2014, respectively.

### *Fair Value of Financial Instruments*

Fair value is defined as the exit price that would be received to sell an asset or paid to transfer a liability. 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 in the below with level 1 having the highest priority 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.

The Company evaluates its financial instruments at each reporting period to determine if any transfers between the various three-level hierarchy have occurred and appropriately reclassifies its financial instruments to the appropriate level within the hierarchy.

### *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; however, we do not recognize revenue until all applicable substantive customer acceptance requirements have been met. The Company's credit and exchange policy includes provisions for the return of product between 30 to 90 days, depending on the specific terms of the individual agreement, when that product (1) does not meet specifications, (2) is damaged in shipment (in limited circumstances where title does not transfer until delivery), or (3) is exchanged for an alternative grade of Captisol. All product returns are subject to 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 vendor-specific objective evidence ("VSOE"), then third-party evidence ("TPE") and if neither VSOE nor TPE exist, the Company uses its best estimate of selling price.

Many of the Company's revenue arrangements involve the bundling of a license with the option to purchase manufactured product. Licenses are granted to pharmaceutical companies for the use of Captisol in the development of pharmaceutical compounds. The licenses may be granted for the use of the Captisol product 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

## [Table of Contents](#)

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.

In May 2014, the Company entered into a licensing agreement and research collaboration with Omthera Pharmaceuticals. The research collaboration targets the development of novel products that utilize the proprietary Ligand developed LTP TECHNOLOGY™ to improve lipid-lowering activity of certain omega-3 fatty acids. The Company is eligible to receive compensation and reimbursement from Omthera for internal research efforts and external costs incurred, as well as development and regulatory event-based payments. The completion of a proof of concept under the development program would trigger a \$1.0 million payment which is determined to be a milestone under the milestone method of accounting as (1) it is an event that can only be achieved in part on the Company's past performance, (2) there was substantive uncertainty at the date the arrangement was entered into that the event would be achieved and (3) it results in additional payment being due to the Company. None of the other event-based payments represents a milestone under the milestone method of accounting. No event based payment or milestone was achieved during the periods presented. The Company received \$0.5 million from Omthera in 2014 under the agreement and recognized \$0.4 million as collaborative revenue based on the percentage of completion of the research program at December 31, 2014. No milestone payment or contingent payment was received in 2014 or in the six months ended June 30, 2015.

### *Accounting for 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		Six months ended	
	June 30,		June 30,	
	2015	2014	2015	2014
Stock-based compensation expense as a component of:				
Research and development expenses	\$ 1,253	\$ 956	\$ 2,174	\$ 1,645
General and administrative expenses	2,507	2,071	4,501	3,448
	<u>\$ 3,760</u>	<u>\$ 3,027</u>	<u>\$ 6,675</u>	<u>\$ 5,093</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		Six months ended	
	June 30,		June 30,	
	2015	2014	2015	2014
Risk-free interest rate	1.7%	1.9%	1.8%	1.9%
Dividend yield	—	—	—	—
Expected volatility	58%	67%	58%	69%
Expected term	6.6	6.4	6.6	6.4
Forfeiture rate	8.5%	8.6%	8.5%	8.6%-9.7%

## Table of Contents

The risk-free interest rate is based on the U.S. Treasury yield curve at the time of the grant. The expected term of the employee and non-employee director options is the estimated weighted-average period until exercise or cancellation of vested options (forfeited unvested options are not considered) based on historical experience. The expected term for consultant awards is the remaining period to contractual expiration. Volatility is a measure of the expected amount of variability in the stock price over the expected life of an option expressed as a standard deviation. In making this assumption, the Company used the historical volatility of the Company's stock price over a period equal to the expected term. The forfeiture rate is based on historical data at the time of the grant.

### *Cost of Material Sales*

The Company determines cost using the first-in, first-out method. Cost of goods sold include all costs of purchase and other costs incurred in bringing the inventories to their present location and condition, including costs to store and distribute.

### *Preclinical Study and Clinical Trial Accruals*

Substantial portions of the Company's preclinical studies and all of the Company's clinical trials have been performed by third-party laboratories, contract research organizations, or other vendors (collectively "CROs"). Some CROs bill monthly for services performed, while others bill based upon milestone achievement. The Company accrues for each of the agreements it has with CROs on a monthly basis. For preclinical studies, accruals are estimated based upon the percentage of work completed and the contract milestones achieved. For clinical studies, accruals are estimated based upon a percentage of work completed, the number of patients enrolled and the duration of the study. The Company monitors patient enrollment, the progress of clinical studies and related activities to the extent possible through internal reviews of data reported to it by the CROs, correspondence with the CROs and clinical site visits. The Company's estimates are dependent upon the timelines and accuracy of the data provided by its CROs regarding the status of each program and total program spending. The Company periodically evaluates its estimates to determine if adjustments are necessary or appropriate based on information it receives concerning changing circumstances, and conditions or events that may affect such estimates. No material adjustments to preclinical study and clinical trial accrued expenses have been recognized to date.

### *Research and Development*

Research and development expense consists of labor, material, equipment, and allocated facility costs of the Company's scientific staff who are working pursuant to the Company's collaborative agreements and other research and development projects. Also included in research and development expenses are third-party costs incurred for the Company's research programs including in-licensing costs, CRO costs and costs incurred by other research and development service vendors. We expense these costs as they are incurred. When we make payments for research and development services prior to the services being rendered, we record those amounts as prepaid assets on our consolidated balance sheet and we expense them as the services are provided.

### *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. A valuation allowance is provided for deferred tax assets if it is more likely than not that these items will either expire before the Company is able to realize their benefit or if future deductibility is uncertain. As of June 30, 2015, the Company had provided a full valuation allowance against its deferred tax assets as recoverability was uncertain. 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.

The Company's ending deferred tax liability represents a future tax obligation for current tax amortization claimed on acquired IPR&D. As the Company cannot estimate when the IPR&D assets will be amortizable for financial reporting purposes, the deferred tax liability associated with the IPR&D assets cannot be used to support the realization of the Company's deferred tax assets. As a result, the Company is required to increase its valuation allowance and record a charge to deferred taxes.

## Table of Contents

### *Discontinued Operations - Oncology Product Line*

In 2006, the Company and Eisai Inc. and Eisai Co., Ltd. (collectively "Eisai"), entered into an agreement whereby Eisai acquired all of the Company's worldwide rights in and to its oncology products. The Oncology product line included the Company's four marketed oncology drugs: Ontak, Targretin capsules, Targretin gel and Panretin gel.

### *Discontinued Operations - Avinza Product Line*

In 2006, the Company and King Pharmaceuticals, now a subsidiary of Pfizer, entered into an agreement whereby Pfizer acquired all of the rights in and to Avinza in the United States, its territories and Canada. Pursuant to the terms of the agreement, the Company retained the liability for returns of product from wholesalers that had been sold by the Company prior to the close of the transaction. Accordingly, as part of the accounting for the gain on the sale of Avinza, the Company recorded a reserve for Avinza product returns.

### *Segment Reporting*

Under ASC 280, *Segment Reporting*, operating segments are defined as components of an enterprise about which separate financial information is available that is regularly evaluated by the entity's chief operating decision maker, in deciding how to allocate resources and in assessing performance. The Company has evaluated this codification and has identified two reportable segments: the development and commercialization of drugs using Captisol technology and the 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.

### *Comprehensive Income (Loss)*

Comprehensive income (loss) represents net income (loss) adjusted for the change during the periods presented in unrealized gains and losses on available-for-sale securities less reclassification adjustments for realized gains or losses included in net income. The unrealized gains or losses are reported on the consolidated statements of comprehensive income.

### *Consolidation of 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. See *Note 3, Investment in Viking Therapeutics, Inc.*, for additional details.

### *Convertible Debt*

In August 2014, the Company completed a \$245.0 million offering of convertible senior notes, which mature in 2019 and bear interest at 0.75% (the "2019 Convertible Senior Notes"). 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.

### *New Accounting Pronouncements*

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 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

## [Table of Contents](#)

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 February 2015, FASB issued ASU 2015-02 *Consolidation (Topic 810): Amendments to the Consolidation Analysis*. ASU 2015-02 changes the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. It is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2015. Early adoption is permitted, including adoption in an interim period. Management is currently evaluating the impact of the adoption of ASU 2015-02 on our consolidated 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. Management expects to change the presentation on our consolidated balance sheets accordingly for all periods impacted upon the required adoption date.

## 2. Fair Value Measurements

The Company measures certain financial assets and liabilities at fair value on a recurring basis, including marketable securities, co-promote termination payments receivable and the related liability, contingent liabilities, and convertible note receivable from Viking.

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 June 30, 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)
<b>Assets:</b>				
Cash equivalents <sup>(1)</sup>	\$ 88,077	\$ —	\$ 88,077	\$ —
Short-term investments <sup>(2)</sup>	73,371	13,262	60,109	—
Note receivable Viking Therapeutics, Inc. <sup>(3)</sup>	5,547	—	—	5,547
<b>Total assets</b>	<b>\$ 166,995</b>	<b>\$ 13,262</b>	<b>\$ 148,186</b>	<b>\$ 5,547</b>
<b>Liabilities:</b>				
Current contingent liabilities-CyDex <sup>(4)</sup>	\$ 4,597	\$ —	\$ —	\$ 4,597
Current contingent liabilities-Metabasis <sup>(5)</sup>	3,077	—	3,077	—
Long-term contingent liabilities-CyDex <sup>(4)</sup>	5,773	—	—	5,773
Long-term contingent liabilities-Metabasis <sup>(5)</sup>	5,316	—	5,316	—
Liability for amounts owed to former licensees <sup>(6)</sup>	1,678	1,678	—	—
<b>Total liabilities</b>	<b>\$ 20,441</b>	<b>\$ 1,678</b>	<b>\$ 8,393</b>	<b>\$ 10,370</b>

## Table of Contents

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, 2014 (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)
<b>Assets:</b>				
Cash equivalents <sup>(1)</sup>	\$ 69,261	\$ —	\$ 69,261	\$ —
Current co-promote termination payments receivable <sup>(7)</sup>	322	—	—	322
Short-term investments <sup>(2)</sup>	7,133	7,133	—	—
<b>Total assets</b>	<b>\$ 76,716</b>	<b>\$ 7,133</b>	<b>\$ 69,261</b>	<b>\$ 322</b>
<b>Liabilities:</b>				
Current contingent liabilities-CyDex <sup>(4)</sup>	\$ 6,796	\$ —	\$ —	\$ 6,796
Current co-promote termination liability <sup>(7)</sup>	322	—	—	322
Long-term contingent liabilities-Metabasis <sup>(5)</sup>	3,652	—	3,652	—
Long-term contingent liabilities-CyDex <sup>(4)</sup>	4,701	—	—	4,701
Liability for amounts owed to former licensees <sup>(6)</sup>	773	773	—	—
<b>Total liabilities</b>	<b>\$ 16,244</b>	<b>\$ 773</b>	<b>\$ 3,652</b>	<b>\$ 11,819</b>

\*Adjusted to correct an error in disclosure that was deemed immaterial to the financial statements taken as a whole. Contingent liabilities related to Metabasis were reclassified from Level 1 to Level 2 as market is deemed inactive. Additionally, certain certificates of deposit with maturities less than 90 days were not previously disclosed in the table above.

- (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 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 June 30, 2015. 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.

## Table of Contents

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

	<u>June 30, 2015</u>	<u>December 31, 2014</u>
Range of annual revenue subject to revenue sharing (1)	\$20.2 million-\$21.8 million	\$17.2 million-\$17.3 million
Revenue volatility	30%	25%
Average probability of commercialization	80%	81%
Sales beta	0.50	0.60
Credit rating	B	B
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 June 30, 2015 is as follows (in thousands):

### **Assets:**

Fair value of level 3 financial instrument assets as of December 31, 2014	\$ 322
Assumed payments made by Pfizer or assignee	(390)
Fair value adjustments to co-promote termination liability	68
Viking note receivable	5,547
Fair value of level 3 financial instrument assets as of June 30, 2015	<u>\$ 5,547</u>

### **Liabilities:**

Fair value of level 3 financial instrument liabilities as of December 31, 2014	\$ 11,819
Assumed payments made by Pfizer or assignee	(390)
Payments to CVR and other former license holders	(3,296)
Fair value adjustments to contingent liabilities	2,169
Fair value adjustments to co-promote termination liability	68
Fair value of level 3 financial instrument liabilities as of June 30, 2015	<u>\$ 10,370</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 \$353.6 million as of June 30, 2015. The carrying value of the notes does not reflect the market rate. See Note 7 *Financing Arrangements* for additional information.

#### *Investment in Viking Therapeutics, Inc.*

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, Inc.* for additional information. The market value of the Company's investment in Viking was \$34.2 million as of June 30, 2015. The carrying value of the investment in Viking does not reflect the market value.

## [Table of Contents](#)

### **3. Investment in Viking Therapeutics, Inc.**

#### *Transaction History*

In May 2014, the Company entered into a Master License Agreement ("MLA") to license rights to five programs to Viking, an unrelated clinical-stage biopharmaceutical company focused on the development of novel therapies for metabolic and endocrine disorders. As an upfront payment under the MLA, Viking agreed to issue to the Company shares of Viking common stock having an aggregate value of approximately \$29.0 million, subject to adjustment in certain circumstances, upon the consummation of Viking's initial public offering (the "Viking IPO") or certain other qualified financing events. In addition, Viking agreed to pay the Company royalties and milestone payments based on the progression and eventual sale of any products developed under the rights and licenses granted under the MLA. As part of this transaction, the Company extended a \$2.5 million loan to Viking under a Loan and Security Agreement ("LSA") and evidenced by a convertible note. Under the terms of the LSA, the principal amount outstanding accrues interest at a fixed rate equal to 5%.

In April 2015, the Company entered into an amendment to the MLA with Viking (the "MLA Amendment") which among other things, caps the Company's aggregate ownership of Viking common stock to 49.9% of the Viking capital stock outstanding following the closing of the Viking IPO. Additionally, the Company and Viking entered into an amendment to the LSA (the "LSA Amendment"), pursuant to which, the loans are no longer due and payable upon completion of the Viking IPO, but were extended to become due upon the earlier of: (i) a certain private qualified financing transaction with aggregate net proceeds to Viking of at least \$20.0 million or (ii) a public offering subsequent to the Viking IPO with aggregate net proceeds to Viking of at least \$20.0 million or (iii) one year after the closing of the Viking IPO. 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. As of June 30, 2015, the aggregate fair market value of the note receivable was \$5.5 million.

In May 2015, Viking completed the Viking IPO selling 3.5 million shares of its common stock at an initial offering price of \$8.00 per share for an aggregate offering price of \$27.6 million before underwriting discounts and commissions. 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. In addition, pursuant to the amended MLA Amendment, the Company received approximately 3.7 million shares of Viking common stock having an aggregate value of approximately \$29.2 million based on the initial public offering price of \$8.00 per share. As a result, the Company including its related parties owned an aggregate of 48.8% of the outstanding common stock of Viking, based on the shares of outstanding Viking common stock at June 30, 2015. As of June 30, 2015, the carrying value of the Company's investment in Viking was \$34.0 million.

#### *Accounting Consideration*

In May 2014, the Company determined it held a variable interest in Viking. The Company's variable interests in Viking included the convertible note issued pursuant to the LSA and the Company's potential upfront payment of equity pursuant to the MLA. The Company considered certain criteria, including risk and reward sharing, experience and financial condition of its partner, voting rights, involvement in day-to-day operating decisions, the Company's representation on Viking's executive committee, and level of economics between the Company and Viking. Based on these criteria, and using its judgment, the Company determined that it was the primary beneficiary of Viking and, as a result, the Company consolidated Viking on its financial statements as a variable interest entity ("VIE"). From May 21, 2014 through May 4, 2015, the date of Viking's initial public offering (the "Viking IPO"), the Company recorded 100% of the losses incurred as net loss attributable to noncontrolling interest because it was a primary beneficiary with no equity interest in the VIE. The loans issued pursuant to the LSA was included as notes payable by Viking and were eliminated as long as the Company consolidated Viking on its financial statements.

Upon completion of the Viking IPO in May 2015, the Company determined that Viking was no longer a VIE. The Company also determined that it does not have voting control or other elements of control that would require consolidation of Viking. As a result of this assessment, the Company deconsolidated Viking on May 4, 2015 by derecognizing its assets, liabilities, and noncontrolling interest from the Company's consolidated financial statements. Applying deconsolidation accounting guidance, the Company determined, based on an independent valuation, the fair value of its equity investment in Viking upon deconsolidation was approximately \$34.9 million after applying a discount on the Viking IPO price due to applicable transfer restrictions applicable to the Company as an affiliate of Viking pursuant to Rule 144 under the Securities Act of 1933. Based on a separate independent valuation, the Company determined that the fair value of the convertible notes receivable was approximately \$5.5 million upon deconsolidation. The Company recorded a \$28.2 million gain on deconsolidation of Viking in its consolidated statement of operations as of June 30, 2015.

## Table of Contents

Following the deconsolidation, the Company accounts for its equity investment in Viking under the equity method. For each of the three and six months ended June 30, 2015, the Company reported approximately \$0.9 million as equity in net losses from Viking. The Company has opted to account for the Viking convertible notes receivable at fair value. For each of the three and six months ended June 30, 2015, the Company recorded no change in the fair value of the Viking convertible notes since the deconsolidation date. See Note 2, *Fair Value Measurements* for additional details.

### *Viking's Assets and Liabilities*

As of June 30, 2015, Viking's total assets were \$22.3 million, total liabilities were \$4.9 million and net losses for the three and six months ended June 30, 2015 were \$7.9 million and \$13.6 million, respectively. As of December 31, 2014 Viking's assets and liabilities which were consolidated for the period shown were as follows (in thousands):

	<b>December 31, 2014</b>
Cash and cash equivalents	\$ 756
Other current assets	18
Capitalized IPO expenses	2,268
Total current assets	\$ 3,042
Other assets	\$ 1
Total assets	\$ 3,043
Accounts payable	\$ 2,211
Accrued liabilities	77
Current portion of notes payable	334
Total current liabilities	\$ 2,622
Long-term portion of notes payable	2,331
Total liabilities	\$ 4,953

### *Metabasis CVR payouts*

In connection with the shares of Viking common stock received pursuant to the MLA, the Company will make a cash payment to the holders of certain Metabasis CVRs. The Company made a cash payment to certain holders of Metabasis CVRs of \$0.4 million during the three and six months ended June 30, 2015. Additionally, the Company made a cash payment to certain holders of Metabasis CVRs of \$0.5 million in July 2015. The Company estimates that the remaining cash payment, expected to be made in January 2016, will be approximately \$2.6 million. See Note 1, *Basis of Presentation-Contingent Liabilities* for additional information on the Metabasis CVRs.

[Table of Contents](#)

**4. Lease Obligations**

The Company leases office and laboratory facilities in California, Kansas and New Jersey. These leases expire between 2015 and 2019, 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 June 30, 2015 (in thousands):

Operating lease obligations:	Lease Termination Date	Less than 1 year	1 year	2 years	3 years	4 years	Total
Corporate headquarters- San Diego, CA	June 2019	\$ 691	\$ 709	\$ 727	\$ 747	—	\$ 2,874
Bioscience and Technology Business Center- Lawrence, KS	December 2017	54	54	27	—	—	135
Vacated office and research facility-San Diego, CA	August 2015	191	—	—	—	—	191
Vacated office and research facility- Cranbury, NJ	August 2016	2,614	436	—	—	—	3,050
<b>Total operating lease obligations</b>		<b>\$ 3,550</b>	<b>\$ 1,199</b>	<b>\$ 754</b>	<b>\$ 747</b>	<b>—</b>	<b>\$ 6,250</b>
<b>Sublease payments expected to be received:</b>							
Corporate headquarters- San Diego, CA	June 2019	\$ 436	\$ 446	\$ 457	\$ 469	—	\$ 1,808
Vacated office and research facility- San Diego, CA	August 2015	78	—	—	—	—	78
Office and research facility- Cranbury, NJ	August 2016	212	35	—	—	—	247
<b>Net operating lease obligations</b>		<b>\$ 2,824</b>	<b>\$ 718</b>	<b>\$ 297</b>	<b>\$ 278</b>	<b>—</b>	<b>\$ 4,117</b>

As of June 30, 2015 and December 31, 2014, the Company had lease exit obligations of \$1.9 million and \$3.3 million, respectively. For the three and six months ended June 30, 2015, the Company made cash payments, net of sublease payments received of \$0.9 million and \$1.9 million, respectively. The Company recognized adjustments for accretion and changes in leasing assumptions of \$0.2 million and \$0.4 million for the three and six months ended June 30, 2015, respectively. For the three and six months ended June 30, 2014, the Company made cash payments, net of sublease payments received of \$0.9 million and \$1.8 million, respectively. The Company recognized adjustments for accretion and changes in leasing assumptions of \$0.1 million and \$0.2 million for the three and six months ended June 30, 2014, respectively.

Total rent expense under all office leases for each of the three and six months ended June 30, 2015 was \$0.1 million and \$0.2 million, respectively. Total rent expense for the three and six months ended June 30, 2014 was \$0.2 million and \$0.4 million, respectively. The Company recognizes rent expense on a straight-line basis. Deferred rent at both June 30, 2015 and December 31, 2014 was \$0.3 million, and is included in other long-term liabilities.

## [Table of Contents](#)

### 5. Segment Reporting

The Company evaluates performance based on the operating income (loss) of the respective business segments. The segment results may not represent actual results that would be expected if they were independent, stand-alone businesses. Segment information is as follows (in thousands):

#### Balance Sheet Data:

	As of June 30, 2015		
	Ligand	CyDex	Total
Total assets	\$ 239,133	\$ 65,629	\$ 304,762

	As of December 31, 2014		
	Ligand	CyDex	Total
Total assets	\$ 184,215	\$ 73,814	\$ 258,029

#### Operating Data:

	For the three months ended June 30, 2015		
	Ligand	CyDex	Total
Net revenues from external customers	\$ 5,200	\$ 13,218	\$ 18,418
Depreciation and amortization expense	\$ 38	\$ 597	\$ 635
Operating (loss) income	\$ (4,465)	\$ 8,830	\$ 4,365
Interest expense, net	\$ 2,969	\$ —	\$ 2,969
Income tax (expense) benefit	\$ (254)	\$ (11)	\$ (265)

	For the three months ended June 30, 2014		
	Ligand	CyDex	Total
Net revenues from external customers	\$ 5,692	\$ 4,916	\$ 10,608
Depreciation and amortization expense	\$ 68	\$ 601	\$ 669
Operating (loss) income	\$ (867)	\$ 2,225	\$ 1,358
Interest expense, net	\$ 181	\$ —	\$ 181
Income tax (expense) benefit	\$ 45	\$ 2	\$ 47

	For the six months ended June 30, 2015		
	Ligand	CyDex	Total
Net revenues from external customers	\$ 14,206	\$ 18,814	\$ 33,020
Depreciation and amortization expense	\$ 102	\$ 1,194	\$ 1,296
Operating (loss) income	\$ (4,007)	\$ 11,722	\$ 7,715
Interest expense, net	\$ 5,945	\$ —	\$ 5,945
Income tax (expense) benefit	\$ (268)	\$ (11)	\$ (279)

	For the six months ended June 30, 2014		
	Ligand	CyDex	Total
Net revenues from external customers	\$ 12,483	\$ 14,083	\$ 26,566
Depreciation and amortization expense	\$ 134	\$ 1,203	\$ 1,337
Operating (loss) income	\$ (938)	\$ 7,396	\$ 6,458
Interest expense, net	\$ 429	\$ —	\$ 429
Income tax (expense) benefit	\$ (6)	\$ —	\$ (6)

### 6. Financing Arrangements

The Company fully repaid its secured term loan credit facility on July 31, 2014. Under the terms of the secured debt, the Company made interest-only payments through February 2013. Subsequent to the interest-only payments, the note

## Table of Contents

amortized with principal and interest payments through the remaining term of the loan. Additionally, the Company made an additional final payment equal to 6% of the total amount borrowed which was due at maturity and was accreted over the life of the loan.

### *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 initial conversion price of the notes represented a premium of approximately 35% to the \$55.59 per share close price of the Company's common stock on August 12, 2014. The notes bear 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 June 30, 2015, the "if-converted value" exceeded the principal amount of the 2019 Convertible Senior Notes by \$77.8 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 were recorded as assets on the balance sheet. 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 June 30, 2015 and December 31, 2014, 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 Securities and Exchange Commission (the "SEC") registering the issuance of the shares under the warrants.

### *Viking Therapeutics, Inc.*

Prior to the completion of the Viking IPO in May 2015, the Company held a variable interest in Viking and consolidated Viking in its consolidated financial statements. As a result, Viking had convertible notes payable of \$0.3 million, which were included in the Company's financing arrangements for the period ended December 31, 2014. The notes were converted to Viking common stock upon completion of the Viking IPO in May 2015.

The carrying values and the fixed contractual coupon rates of the Company's financing arrangements as of June 30, 2015 and December 31, 2014 were as follows (in thousands):

	<b>June 30, 2015</b>	<b>December 31, 2014</b>
<i>2019 Convertible Senior Notes</i>		
Principal amount outstanding	\$ 245,000	\$ 245,000
Unamortized discount	(44,433)	(49,092)
Net carrying amount	200,567	195,908
Convertible notes payable, Viking Therapeutics, Inc.	—	334
<b>Total notes payable</b>	<b>\$ 200,567</b>	<b>\$ 196,242</b>

## **7. Stockholders' Equity**

The Company grants options and awards to employees and non-employee directors. Only new shares of common stock are issued upon the exercise of stock options. Non-employee directors are accounted for as employees. Options and restricted stock granted to certain directors vest in equal monthly installments over the one-year period following the date of grant. Options granted to employees vest 1/8 on the six month anniversary of the date of grant, and 1/48 each month thereafter for 42 months. Option awards generally expire ten years from the date of grant.

### Stock Option Activity

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

## Table of Contents

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term in Years	Aggregate Intrinsic Value (In thousands)
Balance as of December 31, 2014	1,800,697	\$ 28.78	7.3	\$ 51,558
Granted	262,747	\$ 58.84		
Exercised	(212,349)	\$ 25.58		
Forfeited	(78,685)	\$ 45.75		
Balance as of June 30, 2015	1,772,410	\$ 32.86	7.0	\$ 120,588
Exercisable as of June 30, 2015	1,139,894	\$ 23.62	6.1	\$ 88,090
Options vested and expected to vest as of June 30, 2015	1,772,410	\$ 32.86	7.0	\$ 120,588

The weighted-average grant date fair value of all stock options granted during the six months ended June 30, 2015 was \$33.66 per share. The total intrinsic value of all options exercised during the six months ended June 30, 2015 and 2014 was approximately \$12.4 million and \$13.7 million, respectively. As of June 30, 2015, there was \$16.0 million of total unrecognized compensation cost related to nonvested stock options. That cost is expected to be recognized over a weighted-average period of 2.6 years.

Net cash received from options exercised during the six months ended June 30, 2015 and 2014 was approximately \$5.3 million and \$3.6 million, respectively. There is no current tax benefit related to options exercised because of net operating losses for which a full valuation allowance has been established.

As of June 30, 2015, 0.8 million shares were available for future option grants or direct issuance under the Company's 2002 Stock Incentive Plan, as amended.

### Restricted Stock Activity

Restricted stock activity for the six months ended June 30, 2015 was as follows:

	Shares	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2014	82,673	\$ 45.76
Granted	100,954	\$ 58.62
Vested	(48,066)	\$ 44.78
Cancelled	(15,512)	\$ 54.91
Nonvested at June 30, 2015	120,049	\$ 55.79

Restricted stock awards generally vest over three years. As of June 30, 2015, there was \$5.4 million of total unrecognized compensation cost related to nonvested restricted stock. That cost is expected to be recognized over a weighted-average period of 2.0 years.

### Employee Stock Purchase Plan

The Company's Employee Stock Purchase Plan, as amended and restated (the "Amended ESPP") allows participants 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.

The Amended ESPP allows employees to purchase Ligand common stock at the end of each six month period at a price equal to 85% of the lesser of fair market value on either the start date of the period or the last trading day of the period (the "Lookback Provision"). The 15% discount and the Lookback Provision make the Amended ESPP compensatory. There were 2,654 and 2,230 shares of common stock issued under the amended ESPP during either of the six months ended June 30, 2015 and 2014, respectively. The Company recorded compensation expense related to the ESPP of \$36,000 and \$31,000 for

## [Table of Contents](#)

the six months ended June 30, 2015 and 2014, respectively. As of June 30, 2015, 73,087 shares were available for future purchases under the Amended ESPP and 0.2 million shares of common stock had been issued under the Amended ESPP to employees. For shares purchased under the Company's Amended ESPP, a weighted-average expected volatility of 36% and 39% and an expected term of 6 months was used for the period ended June 30, 2015 and 2014, respectively.

## 8. 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 *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*

On June 8, 2012, a federal securities class action and shareholder derivative lawsuit was filed in the Eastern District of Pennsylvania alleging that the Company and its CEO aided and abetted 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 May 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 on March 20, 2015. The court has set oral argument to be held in September. The Company intends to continue to vigorously defend against the claims against the Company and its CEO. Due to the complex nature of the legal and factual issues involved, however, the outcome of the matter is not presently determinable.

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

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

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

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

## [Table of Contents](#)

### Overview

We are a biotechnology 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. Our goal is to create a sustainably profitable business and generate meaningful value for our stockholders. Since a portion of our business model is based on the goal of partnering with other pharmaceutical companies to commercialize and market our assets, a significant amount of our revenue is based largely on payments made to us by partners for royalties, milestones, event-based payments, and license fees. We offer investors an opportunity to invest in the increasingly complicated and unpredictable pharmaceutical industry. In comparison to our peers, we believe we have assembled one of the largest and most diversified asset portfolios in the industry with the potential to generate significant revenue in the future. The therapies in our development portfolio 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, focal segmental glomerulosclerosis ("FSGS), menopausal symptoms and osteoporosis.. We have established multiple alliances with the world's leading pharmaceutical companies including Novartis, Amgen, Merck, Pfizer, Baxter International, and Eli Lilly.

Highlights from year-to-date 2015 include:

- In January, our partner, Retrophin, Inc. announced that they have received orphan drug designation from FDA for Sparsentan for the treatment of FSGS.
- In February, our partner, Amgen, announced that the European Medicines Agency (EMA) has accepted the Marketing Authorization Application (MAA) of Kyprolis®(carfilzomib) for injection for the treatment of patients with relapsed multiple myeloma who have received at least one prior therapy. The MAA has been granted accelerated assessment by the EMA.
- In February, Ligand announced a license agreement with Sermonix for oral lasofoxifene for the United States and additional territories. Under the terms of the agreement, Ligand is entitled to receive up to \$45 million in potential regulatory and commercial milestone payments and tiered royalties of 6% to 10% on future net sales.
- In April, our partner, SAGE Therapeutics Inc., announced a positive end-of-phase 2 meeting with FDA on SAGE-547 for the treatment of patients with super-refractory status epilepticus (SRSE) and completion of treatment for the first patient enrolled in its Phase 3 expanded access protocol for SAGE-547.
- In May, the Viking IPO closed, pursuant to which Viking sold 3.45 million shares of its common stock at an initial offering price of \$8.00 per share.
- In connection with the Viking IPO, we purchased 1.1 million shares of Viking common stock for an aggregate price of \$9.0 million at the price offered to the public. In addition, we received an aggregate of approximately 3.7 million shares of Viking common stock pursuant to the closing of the Viking IPO.
- In May, we acquired financial rights to potential future milestones and royalties for more than 15 biologic development programs from Selexis SA. Each acquired program is fully funded by a development partner. Selexis is a privately held global life science company based in Switzerland focused on drug discovery for lead identification and cell line development for scale-up and manufacturing of therapeutic protein drugs. We previously acquired a portfolio of biologic development programs from Selexis in April, 2013.
- In June, we announced results from a Phase 1b clinical trial with LGD-6972 that demonstrated favorable safety, tolerability and pharmacokinetics in normal healthy volunteers and in subjects with type 2 diabetes mellitus. The trial results also demonstrated a robust, dose-dependent reduction of fasting plasma glucose.
- In June, our partner, Viking, announced the submission of an IND application to the to initiate clinical development of VK5211 in patients with acute hip fracture. Initial studies will evaluate safety, tolerability and pharmacokinetic profile of VK5211 in healthy elderly subjects.
- In June, our partner, Novartis, announced that the FDA approved Promacta® (eltrombopag) for the treatment of children six years and older with chronic immune thrombocytopenia (ITP) who have had an insufficient response to corticosteroids, immunoglobulins or splenectomy.
- In July, our partner, Amgen, announced that the FDA approved the sNDA for Kyprolis® for injection in combination with Revlimid® (lenalidomide) and dexamethasone for the treatment of patients with multiple myeloma who have received one to three prior lines of therapy. The FDA approved the expanded indication for Kyprolis based on data from the ASPIRE

## Table of Contents

study which showed that patients treated in the dexamethasone arm lived 50% longer (8.7 months longer) without their disease worsening compared to patients treated with Revlimid and low-dose dexamethasone alone.

- Ligand entered into a worldwide agreement with Sanofi for the development and commercialization of SAR-125844, a Captisol-enabled™ program. Ligand will receive undisclosed milestones, tiered royalties and revenue from Captisol material sales. Sanofi is responsible for all development costs relating to the program.
- In July, we entered into a new clinical-stage agreement with AiCuris GmbH & Co for an undisclosed anti-infective Captisol-enabled™ program.

## **Results of Operations**

### *Three and six months ended June 30, 2015 and 2014*

Total revenues for the three and six months ended June 30, 2015 were \$18.4 million and \$33.0 million, respectively, compared to \$10.6 million and \$26.6 million, respectively, for the same periods in 2014. We reported net income attributable to common stock holders of \$23.6 million and \$24.3 million for the three and six months ended June 30, 2015, respectively, compared to \$1.6 million and \$3.7 million, respectively, for the same periods in 2014.

### *Royalty Revenue*

Royalty revenues were \$6.6 million and \$16.9 million for the three and six months ended June 30, 2015, respectively, compared to \$5.2 million and \$13.1 million, respectively, for the same periods in 2014. The increase in royalty revenue is primarily due to an increase in Promacta and Kyprolis royalties.

### *Material Sales*

We recorded material sales of \$10.7 million and \$14.4 million for the three and six months ended June 30, 2015, respectively, compared to \$3.5 million and \$9.2 million, respectively, for the same periods in 2014. The increase in material sales of \$7.2 million and \$5.2 million for the three and six months ended June 30, 2015, respectively, is due to an increase in Captisol purchases for use in clinical trials and in commercialized products.

### *Collaborative Research and Development and Other Revenue*

We recorded collaborative research and development and other revenue of \$1.1 million and \$1.7 million for the three and six months ended June 30, 2015, respectively, compared to \$1.9 million and \$4.3 million, respectively, for the same periods in 2014. The decrease of \$0.8 million and \$2.6 million for the three and six months ended June 30, 2015, respectively, is primarily due to significant milestones and upfront fees earned in the first half of 2014.

### *Cost of Sales*

Cost of sales were \$2.6 million and \$3.7 million for the three and six months ended June 30, 2015, respectively, compared to \$1.2 million and \$3.6 million, respectively, for the same periods in 2014. The increase of \$1.4 million and \$0.1 million for the three and six months ended June 30, 2015, respectively, is primarily due to higher material sales in the first half of 2015 offset by invoking lower pricing tiers from our contract manufacturer due to higher quantities of Captisol material ordered.

### *Research and Development Expenses*

Research and development expenses were \$4.0 million and \$8.0 million for the three and six months ended June 30, 2015, respectively, compared to \$2.7 million and \$5.8 million, respectively, for the same periods in 2014. The increase of \$1.3 million and \$2.2 million for the three and six months ended June 30, 2015, respectively, is primarily due to timing of costs associated with internal programs.

As summarized in the table below, we are developing several proprietary products for a variety of indications. Our programs are not limited to the following, but are representative of a range of future licensing opportunities to expand our partnered asset portfolio.

## [Table of Contents](#)

<b>Program</b>	<b>Disease/Indication</b>	<b>Development Phase</b>
Glucagon Receptor Antagonist	Diabetes	Phase I/II
Oral Human Granulocyte Colony Stimulating Factor	Neutropenia	Preclinical
LTP Platform	Metabolic and Cardiovascular	Preclinical
Kinase Inhibitors	Multiple	Preclinical
HepDirect	Liver	Preclinical

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 \$7.2 million and \$13.2 million for the three and six months ended June 30, 2015, respectively, compared to \$5.2 million and \$10.3 million, respectively, for the same periods in 2014. The increase of \$2.0 million and \$2.9 million for three and six months ended June 30, 2015, respectively, is primarily due to an increase in stock-based compensation expense and costs associated with business development activities.

### *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 and \$0.4 million for each of the three and six months ended June 30, 2015, respectively, compared to \$0.1 million and \$0.3 million, respectively, for the same periods in 2014.

### *Interest Expense, net*

Interest expense, net was \$3.0 million and \$5.9 million for the three and six months ended June 30, 2015, respectively, compared to \$0.2 million and \$0.4 million, respectively, for the same periods in 2014. The increase in interest expense of \$2.8 million and \$5.5 million for the three and six months ended June 30, 2015, respectively, is due to cash interest expense and non-cash debt related costs related to our \$245.0 million aggregate principal amount of 0.75% Convertible Senior Notes due 2019, or the 2019 Convertible Senior Notes, partially offset by interest expense related to the term loan facility which was paid off in July 2014.

### *(Increase) decrease in Contingent Liabilities*

We recorded an increase in contingent liabilities of \$7.3 million and \$7.3 million for the three and six months ended June 30, 2015, respectively, compared to an increase of \$1.3 million and \$3.3 million, respectively, for the same periods in 2014. The increase for the three and six months ended June 30, 2015 primarily relates to an increase in the liability for amounts potentially due to holders of CVRs related to our CyDex acquisition of \$1.0 million and an increase of \$6.4 million in the liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition. The increase for the three months ended June 30, 2014 primarily relates to an increase in the liability for amounts potentially due to holders of CVRs related to our CyDex acquisition of \$3.2 million and is partially offset by a decrease of \$1.9 million in the liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition. The increase for the six months ended June 30, 2014 primarily relates to an increase of \$2.7 million in the liability for amounts potentially due to holders of CVRs related to our CyDex acquisition and an increase of \$0.5 million in the liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition.

## [Table of Contents](#)

### *Income Tax Expense*

We recorded income tax expense from continuing operations of \$0.3 million and 0.3 million for the three and six months ended June 30, 2015, respectively, compared to an income tax benefit from continuing operations of \$47,000 and income tax expense of 6,000, respectively, for the same periods in 2014. Our estimated annual effective rate of 1.1% is primarily attributable to an increase in our deferred tax liability associated with the tax amortization of acquired indefinite lived IPR&D intangible assets.

### **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 \$23.6 million for the quarter ended June 30, 2015. As of June 30, 2015, our cash, cash equivalents and marketable securities totaled \$182.2 million, and we had working capital of \$178.8 million with net long-term convertible debt of \$200.6 million. We believe that our currently available funds, cash generated from operations as well as existing sources of and access to financing will be sufficient to fund our anticipated operating, capital requirements and debt service requirement. We expect to build cash in future months as we continue to generate significant cash flow from royalty, license and milestone revenue and Captisol material sales primarily driven by continued increases in Promacta and Kyprolis sales, recent product approvals and regulatory developments, as well as revenue from anticipated new licenses and milestones. In addition, we anticipate that our liquidity needs can be met through other sources, including sales of marketable securities, borrowings through commercial paper and/or syndicated credit facilities and access to other domestic and foreign debt markets and equity markets.

While we believe in the viability of our strategy to generate sufficient operating cash flow and in our ability to raise additional funds, there can be no assurances to that effect. See our Annual Report on Form 10-K for the year ended December 31, 2014, Item 1A. Risk Factors - *If our business does not perform according to our expectations, we may not have sufficient resources to operate our business as currently contemplated.*

### **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, which are classified as short-term investments, as a result of an event-based payment and an upfront license payment received from licensees in December 2012 and June 2014 respectively.

### **Borrowings and Other Liabilities**

#### *Term Loan Facility*

In January 2011, we entered into a \$20.0 million secured term loan credit facility with Oxford Financial Group. The loan was amended in January 2012 to increase the secured credit facility to \$27.5 million. The maturity date of the term loan was August 1, 2014, and we fully repaid the loan as of July 31, 2014.

#### *0.75% Convertible Senior Notes Due 2019*

We have convertible debt outstanding as of June 30, 2015 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**

## [Table of Contents](#)

In August 2014, 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 one year. During the three and six months ended June 30, 2015 we did not repurchase any common shares pursuant to the repurchase program.

### **Public Offerings**

In October 2013, we filed a universal shelf registration statement with the SEC. During the three and six months ended June 30, 2015, we did not issue any common shares through this at-the-market equity issuance program.

### **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 from 2014 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 \$7.5 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 June 30, 2015 was \$10.4 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. The fair value of the liability at June 30, 2015 was \$8.4 million, and as of December 31, 2014 was \$3.7 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 2016. The sublease agreements provide for a 3% increase in annual rents. We had no off-balance sheet arrangements at June 30, 2015 and December 31, 2014.

### **Cash Flows**

#### *Operating Activities*

Operating activities generated cash of \$17.6 million for the six months ended June 30, 2015, compared to \$6.6 million for the same period in 2014.

The cash generated for the six months ended June 30, 2015 reflects net income of \$21.9 million, adjusted by \$7.3 million of non-cash items to reconcile net income to net cash generated from operations. These reconciling items primarily reflect stock-based compensation of \$6.7 million, amortization of debt discount and issuance fees of \$5.1 million, depreciation and amortization of \$1.3 million, gain on deconsolidation of Viking of \$28.2 million, loss on equity investment in Viking of \$0.9 million, realized gain on investments of \$0.5 million, and deferred income taxes of \$0.3 million. The cash generated during the six months ended June 30, 2015 is further impacted by changes in operating assets and liabilities due primarily to a decrease in accounts receivable of \$7.1 million and a decrease in restricted cash of \$0.7 million. Partially offsetting, cash generated for the period was impacted by an increase in other current assets of \$0.5 million, a decrease in accounts payable and accrued liabilities of \$3.1 million, an increase in other long-term assets of \$0.6 million, and an increase in inventory of \$0.5 million.

## Table of Contents

The cash generated for the six months ended June 30, 2014 reflects net income of \$3.4 million, adjusted by \$7.7 million of non-cash items to reconcile net income to net cash generated from operations. These reconciling items primarily reflect an increase in the estimated fair value of contingent liabilities of \$3.3 million, depreciation and amortization of \$1.3 million, stock-based compensation of \$5.1 million, and accretion of notes payable of \$0.2 million, partially offset by a non-cash upfront fee received of \$1.2 million and a realized gain on investments of \$1.0 million. The cash generated during the six months ended June 30, 2014 is further impacted by changes in operating assets and liabilities due primarily to an increase in accounts receivable of \$0.9 million, a decrease in other current assets of \$0.1 million, a decrease in other long-term assets of \$0.2 million and a decrease in accounts payable and accrued liabilities of \$3.7 million, partially offset by an increase in inventory of \$0.6 million.

### *Investing Activities*

Investing activities used cash of \$75.0 million for the six months ended June 30, 2015, compared to \$0.4 million for the same period in 2014.

Cash used by investing activities during the six months ended June 30, 2015 primarily reflects the purchase of short-term investments of \$60.4 million, investment in Viking of \$9.0 million, purchase of commercial license rights of \$4.0 million, payments to CVR holders and other contingency payments of \$3.7 million, and reduction in cash from deconsolidation of Viking of \$0.2 million partially offset by proceeds from short-term investments of \$2.4 million.

Cash used by investing activities during the six months ended June 30, 2014 primarily reflects payments to CVR holders of \$1.7 million, partially offset by proceeds from short-term investments of \$1.2 million and proceeds from the sale of equipment of \$0.1 million.

### *Financing Activities*

Financing activities provided cash of \$5.4 million for the six months ended June 30, 2015, compared to use of cash of \$3.3 million for the same period in 2014.

Cash provided by financing activities for the six months ended June 30, 2015 reflects \$5.4 million of proceeds received from stock option exercises and our employee stock purchase plan.

Cash used by financing activities for the six months ended June 30, 2014 primarily reflects \$6.9 million of repayment of debt, partially offset by proceeds from stock option exercises and our employee stock purchase plan of \$3.6 million.

### *Contractual Obligations*

As of June 30, 2015, future minimum payments due under our contractual obligations were as follows (in thousands):

	Payments Due by Period			
	Total	Less than 1 year	1-2 years	3-4 years
Obligations for uncertain tax positions (1)	\$ —	\$ —	\$ —	\$ —
Purchase obligations (2)	\$ 24,053	\$ 14,633	\$ 9,420	\$ —
Contingent liabilities (3)	\$ 3,840	\$ 3,840	\$ —	\$ —
Note and interest payment obligations (4)	\$ 253,269	\$ 1,838	\$ 3,675	\$ 247,756
Operating lease obligations (5)	\$ 6,250	\$ 3,550	\$ 1,953	\$ 747

- (1) Expected payments related to obligations for uncertain tax positions cannot be reasonably estimated.
- (2) Purchase obligations represent our commitments under our supply agreement with Hovione, LLC for Captisol purchases.
- (3) Contingent liabilities to former shareholders and licenseholders are subjective and 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 and affect amounts owed to former license holders and CVR holders. Only payments due as a result of achievement of revenue thresholds or development and regulatory milestones are included in the table above.
- (4) Note and interest payment obligations represent principal and interest payments due under the 2019 Convertible Senior Notes.
- (5) We lease office and research facilities that we have fully vacated under operating lease arrangements expiring in August 2015 and August 2016. We sublet portions of these facilities through the end of our lease. As of June 30, 2015, we expect to receive aggregate future minimum lease

## Table of Contents

payments totaling \$2.1 million (nondiscounted) over the duration of the sublease agreement (not included in the table above) as follows: less than one year: \$0.7 million, and one to two years: \$0.9 million, and 3 to 4 years \$0.5 million.

We are also required under our CyDex CVR Agreement to invest at least \$1.5 million per year, inclusive of employee expenses, in the acquired business through the year ended 2015. As of June 30, 2015, we expect to exceed that amount for the year ended December 31, 2015.

### *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. Except for the accounting for our investment in Viking Therapeutics, Inc., there have been no material changes in our accounting policies as disclosed in our annual report on Form 10-K for the year ended December 31, 2014.

**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 June 30, 2015, our investment portfolio included investments in available-for-sale equity securities of \$73.4 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.

**ITEM 4. CONTROLS AND PROCEDURES**

As of June 30, 2015, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Interim 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 Interim Chief Financial Officer concluded that our disclosure controls and procedures were 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 Interim 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 Interim 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.

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*

On June 8, 2012, a federal securities class action and shareholder derivative lawsuit was filed in the Eastern District of Pennsylvania alleging that we and our CEO aided and abetted 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 May 2010 and the 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 on March 20, 2015. The court has set oral argument to be held in September. We intend to continue to vigorously defend against the claims against us and our CEO. Due to the complex nature of the legal and factual issues involved, however, the outcome of the matter is not presently determinable.

## Table of Contents

### 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.*

***Revenues based on Promacta and Kyprolis represent a substantial portion of our overall current and/or expected future revenues.***

GSK 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. As a result, any setback that may occur with respect to Promacta or Kyprolis could significantly impair our operating results and/or reduce the market price of our stock. Setbacks for Promacta and Kyprolis 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 product, as well as higher than expected total rebates, returns, discounts, or unfavorable exchange rates.

***Revenue from sales of Captisol material to our collaborative partners represents a significant portion of our current revenue and our continued development and supply of Captisol is subject to a number of risks.***

In January 2011, we completed our merger with CyDex. All of CyDex's products and product candidates, as well as the technology that it outlicenses, are based on Captisol. As a result, 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 our 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 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. We maintain inventory of Captisol, which has a five year shelf life, at three geographically spread storage locations in the United States and Europe. If we were to encounter problems maintaining our inventory, such as natural disasters, at one or all three of these locations, it could lead to supply interruptions. 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, U.S. Patent Nos. 7,635,773 and 8,410,077 and foreign equivalents, are not expected to expire until 2029 and our morphology patents, U.S. Patent Nos. 7,629,331 and 8,049,003 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.

## [Table of Contents](#)

Furthermore, we maintain significant accounts receivable balances with certain customers purchasing Captisol materials. As of June 30, 2015, accounts receivable from one customer were 88% of total accounts receivable. 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.

***The product candidates of our partners and us face significant development and regulatory hurdles prior to partnering and/or marketing which could delay or prevent licensing, sales 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 rates at which we complete our scientific studies and clinical trials depends on many factors, including, but are 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 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.

## Table of Contents

***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 strategy for developing and commercializing many of our potential products, including products aimed at larger markets, includes entering into collaboration agreements with corporate partners and others. These agreements give our collaborative partners significant discretion when deciding whether or not to pursue any development program. 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.

For instance, our collaboration with Viking includes a \$2.5 million loan that we made to Viking to be repaid one year after Vikings initial public offering or upon certain other financing events. Viking recently completed its initial public offering and while we expect that Viking will be able to repay the loan in April 2016, there is no guaranty that they will have the resources to do so at that time. Despite our expectations, if Viking is unable to repay the loan at that time, we may decide to extend the term of our loan to Viking, invest additional capital, or terminate our agreements with Viking. We cannot make any assurances on the collectibility of our loan to Viking.

In addition, our collaborators may develop drugs, either alone or with others that compete with the types of drugs they are developing with us (or that we are developing on our own). This would result in increased competition for our or our partners' programs. If products are approved for marketing under our collaborative programs, revenues we receive will depend on the manufacturing, marketing and sales efforts of our collaborative partners, who generally retain commercialization rights under the collaborative agreements. Generally, our current collaborative partners also have the right to terminate their collaborations at will or under specified circumstances. If any of our collaborative partners breach or terminate their agreements with us or otherwise fail to conduct their collaborative activities successfully (for example, by not making required payments when due, or at all), our product development under these agreements will be delayed or terminated. Disputes or litigation may also arise with our collaborators (with us and/or with one or more third parties), including those over ownership rights to intellectual property, know-how or technologies developed with our collaborators. Such disputes or litigation could adversely affect our rights to one or more of our product candidates. Any such dispute or litigation 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.

***Expirations of, challenges to or failure to secure patents and other proprietary rights may significantly hurt our business.***

Any conflicts resulting from the patent rights of others could significantly reduce the coverage of our patents and limit our ability to obtain meaningful patent protection. We have had and will continue to have discussions with our current and potential collaborative partners regarding the scope and validity of our patents and other proprietary rights. If a collaborative partner or other party successfully establishes that our patent rights are invalid, we may not be able to continue our existing collaborations beyond their expiration. Any determination that our patent rights are invalid also could encourage our collaborative partners to seek early termination of our agreements. Such invalidation could adversely affect our ability to enter into new collaborations.

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.

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.

Generally, our success will depend on our ability and the ability of us and our licensors to obtain and maintain patents and proprietary rights for our potential products both in the United States and in foreign countries. Patents may not be issued from any of these applications currently on file, or, if issued, may not provide sufficient protection. Our patent position, like that of many biotechnology and pharmaceutical companies, is uncertain and involves complex legal and technical questions for

## [Table of Contents](#)

which important legal principles are unresolved. We may not develop or obtain rights to products or processes that are patentable. Even if we do obtain patents, such patents may not adequately protect the technology we own or have licensed. In addition, others may challenge, seek to invalidate, infringe or circumvent any patents we own or license and rights we receive under those patents may not provide competitive advantages to us. For example, our European patent related to Agglomerated forms of Captisol was limited during an opposition proceeding and could be challenged further on appeal, and the rejection of our European patent application related to High Purity Captisol is currently being appealed.

We have obtained patent protection in the United States through 2025 on one or more Agglomerated forms of Captisol and through 2029 on one or more High Purity forms of Captisol. We also have filed patent applications covering the Captisol product that if issued, would not be set to expire until 2033 (for example, our patent WO 2013/130666, filed February 27, 2013, contains composition of matter and use claims). There is no guarantee that our patents will be sufficient to prevent competitors from creating a generic form of Captisol and competing against us, or from developing combination patents for products that will prevent us from developing products using those APIs. In addition, most of the agreements in our Captisol outlicensing business, provide that once the relevant patent expires, the amount of royalties we receive will be reduced or eliminated.

***Our collaborative partners may change their strategy or the focus of their development and commercialization efforts with respect to our partnered programs, and the success of our partnered programs could be adversely affected.***

If our collaborative partners terminate their collaborations with us or do not commit sufficient resources to the development, manufacture, marketing or distribution of our partnered programs, we could be required to devote additional resources to our partnered programs, seek new collaborative partners or abandon such partnered programs, all of which could have an adverse effect on our business. For example, Pfizer recently informed us they have stopped selling Avinza to wholesalers and we expect future revenues, if any, for Avinza to be minimal.

***Third party intellectual property may prevent us or our partners from developing our potential products and we may owe a portion of any payments we receive from our collaborative partners to one or more third parties.***

Our success will depend on our ability and the ability of our collaborative partners to avoid infringing the proprietary rights of others, both in the United States and in foreign countries. In addition, disputes with licensors under our license agreements may arise which could result in additional financial liability or loss of important technology and potential products and related revenue, if any. Further, the manufacture, use or sale of our potential products or our collaborative partners' products or potential products may infringe the patent rights of others. This could impact Captisol, Promacta, Kyprolis, Avinza, Duavee, Viviant, Conbriza, Nexterone, and other products or potential products.

Several drug companies and research and academic institutions have developed technologies, filed patent applications or received patents for technologies that may be related to our business. Others have filed patent applications and received patents that conflict with patents or patent applications we have licensed for our use, either by claiming the same methods or compounds or by claiming methods or compounds that could dominate those licensed to us. In addition, we may not be aware of all patents or patent applications that may impact our ability to make, use or sell any of our potential products. For example, U.S. patent applications may be kept confidential while pending in the United States Patent and Trademark Office and patent applications filed in foreign countries are often first published six months or more after filing.

Disputes with our collaborative partners could delay our ability and the ability of our collaborative partners to achieve milestones or our receipt of other payments. In addition, other possible disputes could delay, interrupt or terminate the research, development and commercialization of certain potential products being developed by either our collaborative partners or by us. The occurrence of any of the foregoing problems could be time-consuming and expensive and could adversely affect our business.

Third parties have not directly threatened an action or claim against us, although we do periodically receive other communications or have other conversations with the owners of other patents or other intellectual property. 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.

In general, litigation claims can be expensive and time consuming to bring or defend against and could result in settlements or damages that could significantly impact our results of operations and financial condition. We cannot predict or determine the occurrence or outcome of these matters or reasonably estimate the amount or range of amounts of any fines or

## [Table of Contents](#)

penalties that might result from a settlement or an adverse outcome. However, a settlement or an adverse outcome could have a material adverse effect on our financial position, liquidity and results of operations.

### ***If we are unable to maintain the effectiveness of our internal controls, our financial results may not be accurately reported.***

The Sarbanes-Oxley Act of 2002 requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. While we anticipate maintaining the integrity of our internal controls over financial reporting and all other aspects of Sarbanes-Oxley Act of 2002, we cannot be certain that a material weakness will not be identified when we test the effectiveness of our control systems in the future. The existence of one or more material weaknesses or significant deficiencies in our internal control over financial reporting could result in errors in our consolidated financial statements. Substantial costs and resources may be required to rectify any internal control deficiencies. If we fail to maintain the adequacy of our internal controls in accordance with applicable standards, we may be unable to conclude on an ongoing basis that we have effective internal controls over financial reporting. If we cannot produce reliable financial reports, our business and financial condition could be harmed, investors could lose confidence in our reported financial information, or the market price of our stock could decline significantly. In addition, our ability to obtain additional financing to operate and expand our business, or obtain additional financing on favorable terms, could be materially and adversely affected, which, in turn, could materially and adversely affect our business, our financial condition and the market value of our securities. Moreover, our reputation with customers, lenders, investors, securities analysts and others may be adversely affected.

### ***We may undertake strategic acquisitions in the future and any difficulties from integrating such 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 In-Process Research and Development, or 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 not be able to hire and/or retain key employees.***

If we are unable to hire and/or retain key employees, we may not have sufficient resources to successfully manage our assets or our business, and we may not be able to perform our obligations under various contracts and commitments. Furthermore, there can be no assurance that we will be able to retain all of our key management and scientific personnel. If we fail to retain such key employees, it could materially and adversely affect our business, financial condition, results of operations or the market price of our stock.

## Table of Contents

### ***Aggregate revenues based on sales of our other products may not meet expectations.***

Revenues based on sales of Avinza, Duavee, Conbriza, Noxafil IV and Nexterone may not meet expectations. Any setback that may occur with respect to these products could impair our operating results and/or reduce the market price of our stock. Setbacks for these 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 product, as well as higher than expected total rebates, returns or discounts. These products also are or may become subject to generic competition. Any such setback could reduce our revenue.

### ***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, and we may be subject to other liabilities related to the sale of our prior commercial product lines.***

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.

In addition, we have agreed to indemnify Eisai and King Pharmaceuticals (now a subsidiary of Pfizer), under certain circumstances pursuant to the asset purchase agreements we entered into in connection with the sale of our prior commercial product lines. Some of our indemnification obligations still remain and our potential liability in certain circumstances is not limited to specific dollar amounts. We cannot predict the liabilities that may arise as a result of these matters. Any claims related to our indemnification obligations to Pfizer or Eisai could materially and adversely affect our financial condition. In addition, Pfizer assumed our obligation to make payments to Organon based on net sales of Avinza (the fair value of which was \$0.0 million as of June 30, 2015). We remain liable to Organon in the event Pfizer defaults on this obligation. Any requirement to pay a material amount to Organon could adversely affect our business and the price of our securities. The sale of our prior commercial product lines does not relieve us of exposure to product liability risks on products we sold prior to divesting these product lines. A successful product liability claim or series of claims brought against us may not be insured against and could result in payment of significant amounts of money and divert management's attention from our business.

### ***If our partners do not reach the market with our partnered programs before our competitors offer products for the same or similar uses, or if our partners are not effective in marketing our partnered programs, our revenues from product sales, if any, will be reduced.***

We face intense competition in our development activities. Our competitors might succeed in obtaining regulatory approval for competitive products more rapidly than our partners can for our partnered programs. In addition, competitors might develop technologies and products that are less expensive and perceived to be safer or more effective than those being developed by us or our partners, which could impair our product development and render our technology obsolete.

### ***If our business does not perform according to our expectations, we may not have sufficient resources to operate our business as currently contemplated.***

We believe that our capital resources, including our currently available cash, cash equivalents, and short-term investments as well as our current and future royalty revenues, will be adequate to fund our operations at their current levels at least for the next 12 months. However, changes may occur that would cause us to consume available capital resources before that time and we may need to complete additional equity or debt financings to fund our operations. Our inability to obtain additional financing could adversely affect our business. Financings may not be available at all or on terms favorable to us. In addition, these financings, if completed, may not meet our capital needs and could result in substantial dilution to our stockholders. If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate one or more of our research or drug development programs. We may also be required to liquidate our business or file for bankruptcy protection. Alternatively, we may be forced to attempt to continue development by entering into arrangements with

## [Table of Contents](#)

collaborative partners or others that require us to relinquish some or all of our rights to technologies or drug candidates that we would not otherwise relinquish.

***We recently sold \$245.0 million aggregate principal amount of 0.75% 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. As of June 30, 2015, no events have occurred which would trigger settlement of the notes in cash.

***Our ability to use our net operating losses, or NOLs, to offset taxes that would otherwise be due could be limited or lost entirely.***

Our ability to use our NOLs to offset taxes that would otherwise be due is dependent upon our generation of future taxable income before the expiration dates of the NOLs, and we cannot predict with certainty whether we will be able to generate future taxable income. In addition, even if we generate taxable income, realization of our NOLs to offset taxes that would otherwise be due could be restricted by annual limitations on use of NOLs triggered by a past or future “ownership change” under Section 382 of the Internal Revenue Code and similar state provisions. An “ownership change” may occur when there is a 50% or greater change in total ownership of our company by one or more 5% shareholders within a three-year period. The loss of some or all of our NOLs could materially and adversely affect our business, financial condition and results of operations. In addition, California and certain states have suspended use of NOLs for certain taxable years, and other states may consider similar measures. As a result, we may incur higher state income tax expense in the future. Depending on our future tax position, continued suspension of our ability to use NOLs in states in which we are subject to income tax could have an adverse impact on our operating results and financial condition. The calculation of the amount of our net operating loss carryforwards may be changed as a result of a challenge by the IRS or other governmental authority or our learning of new information about the ownership of, and transactions in, our securities.

***We use hazardous materials, which may expose us to significant liability.***

In connection with our research and development activities, we handle hazardous materials, chemicals and various radioactive compounds. To properly dispose of these hazardous materials in compliance with environmental regulations, we are required to contract with third parties. We believe that we carry reasonably adequate insurance for toxic tort claims. However, we cannot eliminate the risk or predict the exposure of accidental contamination or injury from the handling and disposing of hazardous materials, whether by us or our third-party contractors. Any accident in the handling and disposing of hazardous materials may expose us to significant liability.

## [Table of Contents](#)

### ***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.

### ***Funding of our drug development programs may not result in future revenues.***

Our drug development programs may require substantial additional capital to successfully complete, 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 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.

### ***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.

## [Table of Contents](#)

***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 Pharmacoepia, Neurogen, Metabasis and CyDex 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.

***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 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 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.

[Table of Contents](#)

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

*Purchases of Equity Securities By the Issuer and Affiliated Purchasers*

There were no repurchases by us of our common stock during the three and six months ended June 30, 2015 under the stock repurchase program approved by our board of directors on August 11, 2014, under which we may acquire up to \$200.0 million of our common stock in open market and negotiated purchases for a period of one year.

**ITEM 3. DEFAULTS UPON SENIOR SECURITIES**

None.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**ITEM 5. OTHER INFORMATION**

None.

**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: August 5, 2015

By: /s/ Melanie J. Herman

Melanie J. Herman

Chief Accounting Officer and Interim Chief Financial Officer

Duly Authorized Officer and Principal Financial Officer

**EXHIBIT INDEX**

<b><u>Exhibit Number</u></b>	<b><u>Description</u></b>
10.1	Second Amendment to Master License Agreement, dated April 8, 2015 among the Company, Metabasis Therapeutics, Inc. and Viking Therapeutics, Inc.
10.2	First Amendment to Loan and Security Agreement, dated April 8, 2015 between 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

† Confidential treatment has been requested for portions of this exhibit. These portions have been omitted and submitted separately to the Securities and Exchange Commission.

## SECOND AMENDMENT TO MASTER LICENSE AGREEMENT

This Second Amendment to Master License Agreement (this “**Amendment**”) is dated as of April 8, 2015 by and between Metabasis Therapeutics, Inc., a Delaware corporation organized having its place of business at 11119 North Torrey Pines Road, Suite 200, La Jolla, CA 92037 (including its successors and permitted assigns, “**Metabasis**”) and Ligand Pharmaceuticals Incorporated, a Delaware corporation organized having its place of business at 11119 North Torrey Pines Road, Suite 200, La Jolla, CA 92037 (including its successors and permitted assigns, “**Ligand**”) on the one hand, and Viking Therapeutics, Inc., a Delaware corporation organized having its place of business at 11119 North Torrey Pines Road, Suite 50, La Jolla, CA 92037, on the other hand (including its successors and permitted assigns, “**Viking**,” and together with Ligand and Metabasis, the “**Parties**”).

This Amendment amends and modifies that certain Master License Agreement, between Metabasis and Ligand on the one hand and Viking on the other hand, dated May 21, 2014, as amended by the First Amendment to Master License Agreement, dated September 6, 2014 (as amended, the “**Agreement**”), as follows:

1. Schedule 6 of the Agreement shall be replaced in its entirety with the Amended Schedule 6 attached hereto. As of immediately prior to the consummation of any Financing Transaction, Viking will take all steps necessary, including without limitation any repurchase, recapitalization, reclassification, stock split, reverse stock split or similar transaction, necessary to effectuate the provisions of Schedule 6.
2. Schedule 7 of the Agreement shall be replaced in its entirety with the Amended Schedule 7 attached hereto.
3. All of the other provisions of the Agreement shall remain in full force and effect.
4. This Amendment may be executed in counterparts, each of which will be deemed an original, and all of which together will be deemed to be one and the same instrument. A facsimile or a portable document format (PDF) copy of this Amendment, including the signature pages, will be deemed an original.

*[Signatures Follow]*

---

**IN WITNESS WHEREOF**, the Parties have caused this Second Amendment to Master License Agreement to be executed and delivered by their respective duly authorized officers as of the day and year first above written.

**Metabasis Therapeutics, Inc.**

By: /s/ John Higgins

Name: John Higgins

Title: Chief Executive Officer

**Ligand Pharmaceuticals Incorporated**

By: /s/ John Higgins

Name: John Higgins

Title: Chief Executive Officer

**Viking Therapeutics, Inc.**

By: /s/ Brian Lian

Name: Brian Lian

Title: President and Chief Executive Officer

---

**AMENDED SCHEDULE 6**

**ISSUANCE OF VIKING SECURITIES**

Licensed Program	Viking Securities to be Issued To:	Dollar Amount of Viking Securities to be Issued:	Number of Shares of Viking Securities
DGAT-1 Program	Metabasis	[***]	(1)
EPOR Program	Ligand	[***]	(1)
SARM Program	Ligand	[***]	(1)
TR-Beta Program	Metabasis	[***]	(1)
FBPase Program	Metabasis	[***]	(1)
TOTAL		\$29,000,000	

\*\* Includes the Exercise Fee

(1) The aggregate number of shares of Viking Securities issued to Ligand and/or Metabasis (collectively) pursuant to Section 5.1(b) and this **SCHEDULE 6** shall be as follows.

(a) In the event the valuation of the Company as of immediately prior to the Financing Transaction, based on the number of shares of capital stock of Viking outstanding calculated on a Fully-Diluted Basis (as defined below) as of immediately prior to the Financing Transaction (and prior to giving effect to the issuance of any shares of Viking Securities in the Financing Transaction) (the “**Pre-Money Valuation**”), is up to or equal to [\*\*\*], the aggregate number of shares of Viking Securities issued to Ligand and Metabasis (collectively) pursuant to this Agreement (for purposes of this subsection (a), the “**MLA Shares**”) shall be equal to:

[\*\*\*]

Notwithstanding the previous sentence, and subject to the subsequent sentence, in the event the MLA Shares, when added to any shares of Viking Securities that Ligand purchases in the Financing Transaction, represents in excess of 49.90% of the outstanding Viking Securities immediately following the Financing Transaction, including without limitation any shares issued in connection with the Financing Transaction (the “**Ownership Cap**”), then the number of MLA Shares acquired hereunder shall be reduced by a number of shares (for purposes of this subsection (a), the “**Cutback Shares**”) which results in Ligand owning a number of Viking Securities immediately after the Financing Transaction not exceeding the Ownership Cap.

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

Notwithstanding the previous sentence, in the event the Financing Transaction is a Public Offering and the underwriters are granted and exercise an option to purchase additional shares (the “**Overallotment Shares**”), then Viking shall issue to Ligand at the time of the closing of the Overallotment Shares, a number of additional shares of Viking Securities equal to the number of Overallotment Shares, but not to exceed the number of Cutback Shares; *provided* that in no event shall the aggregate number of (i) MLA Shares, plus (ii) the shares of Viking Securities that Ligand purchases in the Financing Transaction, plus (iii) the shares of Viking Securities that Ligand receives upon the closing of the Overallotment Shares exceed the Ownership Cap.

For purposes of this Amended Schedule 6, “**Fully-Diluted Basis**” means the total number of shares that (i) includes (A) all then-outstanding shares and shares issuable under then-outstanding equity awards and warrants (if any) as of immediately prior to the Financing Transaction (and prior to giving effect to the issuance of any shares of Viking Securities in the Financing Transaction), (B) shares (and options to purchase shares) issuable pursuant to consulting agreements then in effect, (C) shares issuable to holders of then-outstanding convertible notes (but excluding convertible notes held by Ligand) and (D) any outstanding shares of common stock issued prior to the Financing Transaction, as may be adjusted pursuant to any repurchase, recapitalization, reclassification, stock split, reverse stock split or similar transaction, as well as the shares of Viking Securities to be issued to Ligand pursuant to Section 5.1(b) of the Agreement and this Schedule 6, and (ii) excludes (W) shares of common stock issuable pursuant to employment agreements and employee offer letters then in effect, (X) any other shares of common stock and equity awards issued or issuable in, upon or following the closing of the Financing Transaction, (Y) shares reserved pursuant to Viking’s equity incentive plan (unless the shares are subject to an award outstanding under the plan as of immediately prior to the Financing Transaction), and (Z) shares reserved pursuant to Viking’s employee stock purchase plan.

For the purposes of the dollar amounts, the shares of Viking common stock shall be valued at the price per share provided in Section 5.1(b) (in the case of an initial public offering, the IPO Price per share to the public as defined in Section 1.38 of the Agreement).

For example, if the Pre-Money Valuation is equal to [\*\*\*], Ligand would be entitled to [\*\*\*], or [\*\*\*], of the total [\*\*\*] shares, while the other holders of Viking Securities would be entitled to [\*\*\*], or [\*\*\*], of the total [\*\*\*] shares; if the IPO Price [\*\*\*], is equal to [\*\*\*] per share, then in this example Ligand would receive [\*\*\*] shares as MLA Shares and the other holders of Viking Securities would hold [\*\*\*] shares as of immediately prior to the Financing Transaction.

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

Next, in this example, if Ligand purchases [\*\*\*] in a Public Offering with an aggregate size of [\*\*\*] with the same [\*\*\*] per share IPO Price, Ligand would receive [\*\*\*] shares in the Public Offering for an aggregate ownership of [\*\*\*] shares and the other holders of Viking Securities would initially be allocated [\*\*\*] shares in the Public Offering for an aggregate ownership of [\*\*\*] shares. With a post-Public Offering valuation of [\*\*\*], the number of Viking Securities outstanding after giving effect to the issuance [\*\*\*] shares in the Public Offering would be [\*\*\*]. Investors in the Public Offering other than Ligand would own [\*\*\*] shares (that is, [\*\*\*]). To prevent Ligand from exceeding the Ownership Cap, and based on the aggregate ownership of the holders of Viking Securities other than Ligand, Ligand could not hold more than [\*\*\*] shares (that is, [\*\*\*]) and thus the Cutback Shares would equal [\*\*\*], or [\*\*\*] shares. The other holders of Viking Securities as of immediately prior to the Public Offering would own [\*\*\*] shares of common stock (that is, [\*\*\*]).

Finally, in this example, if the underwriters exercised their overallotment option for the full [\*\*\*] Overallotment Shares (that is, [\*\*\*] of the initial [\*\*\*] shares offered at [\*\*\*] per share for an aggregate offering price of [\*\*\*]), then Ligand would receive an additional [\*\*\*] shares, which is the number of shares required to increase Ligand's ownership to [\*\*\*]. At the end of this example, Ligand would own [\*\*\*] shares (that is, [\*\*\*]) and the other holders of Viking Securities would hold [\*\*\*] shares, of which investors in the Public Offering other than Ligand would own [\*\*\*] shares and the other holders of Viking Securities as of immediately prior to the Public Offering would own [\*\*\*] shares.

(b) In the event the Pre-Money Valuation is greater than [\*\*\*], the aggregate number of shares of Viking Securities issued to Ligand and Metabasis (collectively) pursuant to this Agreement (for purposes of this subsection (b), the "**MLA Shares**") shall be equal to:

[\*\*\*]

Notwithstanding the previous sentence, and subject to the subsequent sentence, in the event the MLA Shares, when added to any shares of Viking Securities that Ligand purchases in the Financing Transaction, represents in excess of the Ownership Cap, then the number of MLA Shares acquired hereunder shall be reduced by a number of shares (for purposes of this subsection (b), the "**Cutback Shares**") which results in Ligand owning a number of Viking Securities immediately after the Financing Transaction not exceeding the Ownership Cap.

Notwithstanding the previous sentence, in the event the Financing Transaction is a Public Offering and the underwriters are granted and exercise an option to purchase Overallotment Shares, then Viking shall issue to Ligand at the time of the closing of the Overallotment Shares, a number of additional shares of Viking Securities equal to the number of

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

Overallotment Shares, but not to exceed the number of Cutback Shares; *provided* that in no event shall the aggregate number of (i) the MLA Shares, plus (ii) the shares of Viking Securities that Ligand purchases in the Financing Transaction, plus (iii) the shares of Viking Securities that Ligand receives upon the closing of the underwriter's option to purchase additional shares exceed the Ownership Cap.

For the purposes of the dollar amounts, the shares of Viking common stock shall be valued at the price per share provided in Section 5.1(b) (in the case of an initial public offering, the IPO Price per share to the public as defined in Section 1.38 of the Agreement).

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

**AMENDED SCHEDULE 7**

**LICENSED PRODUCT MILESTONES AND ROYALTIES <sup>1</sup>**

**A. Development and Commercial Milestones.**

**1. FBPase Program:** Viking shall pay Metabasis the following one-time, non-refundable milestone payments with respect to the first, second, third and fourth different Indication of a Licensed Product containing an FBPase Compound to achieve the following milestone events (without regard to whether the Licensed Product which addresses and achieves a milestone event with respect to a respective Indication also achieved the same (or any other) milestone event as to another one or more of the Indications) and whether achieved by Viking, its Affiliate or its Sublicensee.

<b>Milestone event payable for each Indication up to the fourth Indication</b>	<b>Milestone Payment</b>
[***]	[***]

For the avoidance of doubt, the total maximum milestone payments payable under this Section A.1 for all Licensed Products containing an FBPase Compound and all Indications are \$240,000,000.

With respect to each milestone event, the milestone payments to be made under this Section A.1 shall be due and payable only once (or up to four times, as the case may be) as indicated, even if an Indication is discontinued after a milestone payment has been made.

**2. DGAT-1 Program:** Viking shall pay Metabasis the following one-time, non-refundable milestone payments with respect to the first and second different Indication of a Licensed Product containing a DGAT-1 Compound to achieve the following milestone events (without regard to whether the Licensed Product which addresses and achieves a milestone event with respect to a respective Indication also achieved the same (or any other) milestone event as to another one or more of the Indications) whether achieved by Viking, its Affiliate or its Sublicensee.

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

Milestone event payable for each Indication up to the second Indication	Milestone Payment
[***]	[***]

For the avoidance of doubt, the total maximum milestone payments payable under this Section A.2 for all Licensed Products containing a DGAT-1 Compound are \$156,000,000.

With respect to each milestone event, the milestone payments to be made under this Section A.2 shall be due and payable only once (or up to two times, as the case may be) as indicated, even if the Development of a particular Licensed Product is discontinued after a milestone payment has been made.

**3. EPOR Program:** Viking shall pay Ligand the following one-time, non-refundable milestone payments with respect to the first, second and third different Indication of a Licensed Product containing an EPOR Compound to achieve the following milestone events (without regard to whether the Licensed Product which addresses and achieves a milestone event with respect to a respective Indication also achieved the same (or any other) milestone event as to another Indication) and whether achieved by Viking, its Affiliate or its Sublicensee.

Milestone event payable for each Indication up to the third Indication	Milestone Payment
[***]	[***]

For the avoidance of doubt, the total maximum milestone payments payable under this Section A.3 for all Licensed Products containing an EPOR Compound are \$144,000,000.

With respect to each milestone event, the milestone payments to be made under this Section A.3 shall be due and payable only (or up to three times, as the case may be) as indicated, even if the Development of a particular Licensed Product is discontinued after a milestone payment has been made.

**4. SARM Program:** Viking shall pay Ligand the following one-time, non-refundable milestone payments with respect to the first and the second different Indication of a Licensed Product containing a SARM Compound to achieve the following milestone events (without regard to whether the Licensed Product which addresses and achieves a milestone event with respect to a respective Indication also achieved the same (or any

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

other) milestone event as to another Indication) and whether achieved by Viking, its Affiliate or its Sublicensee.

<b>Milestone event payable for each Indication up to the second Indication</b>	<b>Milestone Payment</b>
[***]	[***]

For the avoidance of doubt, the total maximum milestone payments payable under this Section A.4 for all Licensed Products containing a SARM Compound are \$170,000,000.

With respect to each milestone event, the milestone payments to be made under this Section A.4 shall be due and payable only once (or up to two times, as the case may be) as indicated, even if an Indication is discontinued after a milestone payment has been made.

**5. TR-Beta Program:** Viking shall pay Metabasis the following one-time, non-refundable milestone payments with respect to the first, the second and the third different Indication of a Licensed Product containing a TR-Beta Compound to achieve the following milestone events (without regard to whether the Licensed Product which addresses and achieves a milestone event with respect to a respective Indication also achieved the same (or any other) milestone event as to another one or more of the Indications) and whether achieved by Viking, its Affiliate or its Sublicensee.

<b>Milestone event payable for each Indication up to the third Indication</b>	<b>Milestone Payment</b>
[***]	[***]

For the avoidance of doubt, the total maximum milestone payments payable under this Section A.5 for all Licensed Products containing a TR-Beta Compound are \$225,000,000.

With respect to each milestone event, the milestone payments to be made under this Section A.5 shall be due and payable only once (or up to three times, as the case may be) as indicated, even if an Indication is discontinued after a milestone payment has been made.

**6. Payment of Development, Commercial and Special Milestones.** Viking shall promptly, but in no event later than [\*\*\*] following each achievement of a milestone

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

event set forth in this Section A, notify Ligand in writing of the achievement of such milestone event and shall pay the relevant milestone payment within [\*\*\*] thereafter.

**B. Sublicense Milestone Payments.** Viking shall pay Metabasis a one-time, non-refundable milestone payment of Two Million Five Hundred Thousand Dollars (\$2,500,000) upon the occurrence of a First Commercial Sale of an FB Pase Compound by a Sublicensee (which, for clarity, shall not include a Sublicense to a contract manufacturer in connection with Commercialization).

Viking shall promptly, but in no event later than [\*\*\*] following the achievement of the milestone event set forth in this Section B, notify Ligand in writing of the achievement of such milestone event and shall pay the milestone payment within [\*\*\*] thereafter.

**C. Sales Milestone Payments.**

**1. DGAT-1.** Viking shall pay Metabasis the following one-time, non-refundable milestone payments with respect to Licensed Products containing a DGAT-1 Compound as follows:

<b>Milestone event payable</b>	<b>Milestone Payment</b>
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a DGAT-1 Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a DGAT-1 Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a DGAT-1 Compound reach or surpass [***]	[***]

**2. FB Pase.** Viking shall pay Metabasis the following one-time, non-refundable milestone payments with respect to Licensed Products containing a FB Pase Compound as follows:

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

<b>Milestone event payable</b>	<b>Milestone Payment</b>
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a FBPase Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a FBPase Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a FBPase Compound reach or surpass [***]	[***]

**3. EPOR.** Viking shall pay Ligand the following one-time, non-refundable milestone payments with respect to Licensed Products containing an EPOR Compound as follows:

<b>Milestone event payable</b>	<b>Milestone Payment</b>
The end of the [***] during which cumulative Net Sales for all Licensed Products containing an EPOR Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing an EPOR Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing an EPOR Compound reach or surpass [***]	[***]

**4. SARM.** Viking shall pay Ligand the following one-time, non-refundable milestone payments with respect to Licensed Products containing a SARM Compound as follows:

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

<b>Milestone event payable</b>	<b>Milestone Payment</b>
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a SARM Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a SARM Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a SARM Compound reach or surpass [***]	[***]

**5. TR-Beta.** Viking shall pay Metabasis the following one-time, non-refundable milestone payments with respect to Licensed Products containing a TR-Beta Compound as follows:

<b>Milestone event payable</b>	<b>Milestone Payment</b>
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a TR-Beta Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a TR-Beta Compound reach or surpass [***]	[***]
The end of the [***] during which cumulative Net Sales for all Licensed Products containing a TR-Beta Compound reach or surpass [***]	[***]

**6. Payment of Sales Milestones.** Viking shall include in its report delivered each [\*\*\*] under Section 5.5 of this Agreement a notation regarding the achievement of such milestone event and for which category or categories of Licensed Products it has been achieved. Viking shall pay the relevant milestone payment concurrently with the payment of royalties based on the applicable [\*\*\*] report.

**D. Royalty Payments.**

**1. DGAT-1.** Viking shall, during the applicable Royalty Term, pay to Metabasis a royalty on aggregate annual worldwide Net Sales by Viking and its Affiliates and Sublicensees of all Licensed Products with one or more Valid Claims Covering any DGAT-1 Compound contained in such Licensed Products, at the percentage rates set forth below:

---

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

<b>Annual worldwide Net Sales of Licensed Products Containing a DGAT-1 Compound per Calendar Year (U.S. Dollars)</b>	<b>Incremental Royalty Rate</b>
For Net Sales of such a Licensed Product from [***] up to and including [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***] and less than or equal to [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***]	[***]

By way of illustration, assume in a Calendar Year that aggregate worldwide annual Net Sales of all such Licensed Products total \$950,000,000. The total royalties due and payable by Viking to Metabasis for such Net Sales would be [\*\*\*], calculated as follows:

[\*\*\*]

**2. FBPase.** Viking shall, during the applicable Royalty Term, pay to Metabasis a royalty on aggregate annual worldwide Net Sales by Viking and its Affiliates and Sublicensees of all Licensed Products with one or more Valid Claims Covering any FBPase Compound contained in such Licensed Products, at the percentage rates set forth below:

<b>Annual worldwide Net Sales of Licensed Products Containing a FBPase Compound per Calendar Year (U.S. Dollars)</b>	<b>Incremental Royalty Rate</b>
For Net Sales of such a Licensed Product from [***] up to and including [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***] and less than or equal to [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***]	[***]

By way of illustration, assume in a Calendar Year that aggregate worldwide annual Net Sales of all such Licensed Products total \$950,000,000. The total royalties due and payable by Viking to Metabasis for such Net Sales would be [\*\*\*], calculated as follows:

[\*\*\*]

**3. EPOR.** Viking shall, during the applicable Royalty Term, pay to Ligand a royalty on aggregate annual worldwide Net Sales by Viking and its Affiliates and Sublicensees of all Licensed Products with one or more Valid Claims Covering any EPOR Compound contained in such Licensed Products, at the percentage rates set forth below:

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

<b>Annual worldwide Net Sales of Licensed Products Containing an EPOR Compound per Calendar Year (U.S. Dollars)</b>	<b>Incremental Royalty Rate</b>
For Net Sales of such a Licensed Product from [***] up to and including [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***] and less than or equal to [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***]	[***]

By way of illustration, assume in a Calendar Year that aggregate worldwide annual Net Sales of all such Licensed Products total \$950,000,000. The total royalties due and payable by Viking to Ligand for such Net Sales would be [\*\*\*], calculated as follows:

[\*\*\*]

**4. SARM.** Viking shall, during the applicable Royalty Term, pay to Ligand a royalty on aggregate annual worldwide Net Sales by Viking and its Affiliates and Sublicensees of all Licensed Products with one or more Valid Claims Covering any SARM Compound contained in such Licensed Products, at the percentage rates set forth below:

<b>Annual worldwide Net Sales of Licensed Products Containing a SARM Compound per Calendar Year (U.S. Dollars)</b>	<b>Incremental Royalty Rate</b>
For Net Sales of such a Licensed Product from [***] up to and including [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***] and less than or equal to [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***]	[***]

By way of illustration, assume in a Calendar Year that aggregate worldwide annual Net Sales of all such Licensed Products total \$950,000,000. The total royalties due and payable by Viking to Ligand for such Net Sales would be [\*\*\*], calculated as follows:

[\*\*\*]

**5. TR-Beta.** Viking shall, during the applicable Royalty Term, pay to Metabasis a royalty on aggregate annual worldwide Net Sales by Viking and its Affiliates and Sublicensees of all Licensed Products with one or more Valid Claims Covering any TR-Beta Compound contained in such Licensed Products, at the percentage rates set forth below:

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

---

<b>Annual worldwide Net Sales of Licensed Products Containing a TR-Beta Compound per Calendar Year (U.S. Dollars)</b>	<b>Incremental Royalty Rate</b>
For Net Sales of such a Licensed Product from [***] up to and including [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***] and less than or equal to [***]	[***]
For that portion of Net Sales of a Licensed Product that is greater than [***]	[***]

By way of illustration, assume in a Calendar Year that aggregate worldwide annual Net Sales of all such Licensed Products total \$950,000,000. The total royalties due and payable by Viking to Metabasis for such Net Sales would be [\*\*\*], calculated as follows:

[\*\*\*]

**6. Royalty Payable if no Valid Claim.** Notwithstanding the foregoing, in each country where there is no Valid Claim Covering the applicable Compound contained in the Licensed Products that would be infringed by the sale of such Licensed Product in such country absent a license with respect to Licensor Patents under this Agreement, then the applicable royalty rate set forth in this Section D above as applied to the sale of such Licensed Product in each such country shall be [\*\*\*] as follows: (a) with respect to Licensed Products containing a SARM Compound or a TR-Beta Compound, by [\*\*\*] (i.e., the applicable royalty rate shall be [\*\*\*] the rates set forth in the tables above) and such [\*\*\*] royalty shall be payable for the remaining Royalty Term for such Licensed Products; and (b) with respect to all other Licensed Products, by [\*\*\*] (i.e., the applicable royalty rate shall be [\*\*\*] the rates set forth in the tables above) and such [\*\*\*] royalty shall be payable for the remaining Royalty Term for all other Licensed Products.

**7. Required Third Party License.** If Viking, after arm's-length negotiation, obtains a license from a Third Party to an issued and unexpired Patent the claims of which would be infringed by Viking making, using, selling, offering for sale or importing a Licensed Product, Viking may offset [\*\*\*] of the royalty payments due to such Third Party against royalties due to Licensor with respect to Net Sales of the applicable Licensed Product in the applicable country; provided that in no event shall the royalty rates payable to Licensor with respect to the applicable Licensed Product in the applicable country be reduced by more than [\*\*\*].

\*\*\*Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.

## FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT

**THIS FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT**, dated as of April 8, 2015 (this “**Amendment**”), made by and between **VIKING THERAPEUTICS, INC.**, a Delaware corporation (“**Borrower**”), and **LIGAND PHARMACEUTICALS INCORPORATED**, a Delaware corporation (the “**Lender**”), amends the terms of the Loan and Security Agreement, dated May 21, 2014, by and between the 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) if the Equity Financing is a Qualified Private Financing, the New Preferred and/or other securities of the Borrower to be issued by the Borrower in the Qualified Private Financing; (ii) if the Equity Financing is an Initial Public Offering or Qualified Follow-on Public Offering, the securities of the Borrower to be issued by the Borrower in such offering.

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

“**Equity Financing**” means a Qualified Private Financing, an Initial Public Offering, or a Qualified Follow-on Public Offering.

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

“**Qualified Follow-on Public Offering**” means a firmly underwritten public offering pursuant to the Securities Act, on Form S-1 or Form S-3 (each, as defined in the Securities Act) or any successor forms subsequent to an Initial Public Offering with an initial aggregate offering size of at least Twenty Million Dollars (\$20,000,000).

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

“**Secured Promissory Note Record**” means a schedule of the amounts and dates of Loans made by Borrower, which shall be kept by the Lender.

2. Loans and Terms of Payment and/or Conversion. Section 2 of the Agreement shall be amended and restated to read in its entirety as follows:

2. Loans and Terms of Payment and/or Conversion.

(a) Promise to Pay. Borrower hereby unconditionally promises to pay Lender the outstanding principal amount of all Loans advanced to Borrower by Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

(b) Loans. Subject to the terms and conditions of this Agreement, the Lender agrees to make loans to Borrower in an aggregate amount of Two Million Five Hundred Thousand Dollars (\$2,500,000.00) (such loans are hereinafter referred to singly as a “**Loan**”, and collectively as the “**Loans**”). After repayment by Borrower, no Loan may be reborrowed.

(c) Conversion of Loans; Mandatory Prepayment.

(i) Upon the earlier of (x) the consummation of a Qualified Private Financing, (y) the consummation of a Qualified Follow-on Public Offering or (z) one year after the closing of an Initial Public Offering, the Lender shall have the option, at its sole election and discretion, to elect, in an irrevocable writing delivered to Borrower, (a) to receive that number of fully paid and nonassessable shares of Borrower Equity as is equal to 200% of the quotient obtained by dividing the entire principal amount of the Loans then outstanding plus all accrued and previously unpaid interest thereon by (I) in the case of clause (x), the lowest per share price paid by investors in such Equity Financing, rounded down to the nearest whole share or (II) in the case of clauses (y) or (z), the lowest per share price paid by investors in the Initial Public Offering (the “**Conversion Shares**”); (b) to require the Borrower to prepay

the entire then outstanding principal amount of the Loans plus all accrued and previously unpaid interest thereon in cash equal to an amount that shall equal 200% of the principal amount of the Loans then outstanding plus all accrued and previously unpaid interest thereon (“**Prepayment**”), or (c) to receive a combination of shares under clause (a) and cash under clause (b) up to the aggregate value of 200% of the principal amount of the Loans then outstanding plus all accrued and previously unpaid interest thereon; *provided, however*, if the first to occur event under this Section 2(c)(i) is an Equity Financing which is a Qualified Private Financing, the Lender may also elect to extend the Maturity Date, at its sole option and discretion, to a date to be agreed upon by Borrower and Lender in writing. For clarity, the Lender may exercise its option to receive Conversion Shares and/or cash at any time one year after the closing of an Initial Public Offering.

(ii) Upon the occurrence of a Change of Control prior to the earlier of the occurrence of either (a) the Maturity Date or (b) the closing of the first to occur Equity Financing, the Lender shall, at its sole option and discretion, elect to either, in an irrevocable writing delivered to Borrower, (I) receive that number of fully paid and nonassessable shares of the Borrower’s securities, as is equal to 200% of the quotient obtained by dividing the entire principal amount of the Loans then outstanding plus all accrued and previously unpaid interest thereon by the lower of (A) the deemed Common Stock per share price used to calculate the purchase price paid by the acquirer of Borrower in such Change of Control or (B) the lowest per share price paid by investors for shares of New Preferred prior to the Change of Control (if New Preferred has been issued prior to the Change of Control), in each case rounded down to the nearest whole share, or (II) require the Borrower to make the Prepayment. The Borrower’s securities to be issued in connection with a Change of Control shall be New Preferred (if New Preferred has been issued prior to the Change of Control) or Common Stock, par value \$0.00001 per share, of the Borrower (“**Common Stock**”) (if no New Preferred has been issued prior to the occurrence of the Change of Control) (“**Change of Control Securities**”).

(d) Mechanics of Conversion.

(i) Notice to Lender. The Borrower shall promptly, but in all events at least [\*\*\*] days prior to consummation of an Equity Financing or [\*\*\*] days prior to the consummation of a Change of Control, as applicable, deliver to the Lender written notification of the proposed consummation of an Equity Financing or a Change of Control, as applicable, which notice shall describe the material terms and conditions of such Equity Financing or Change of Control (“**Notice of Transaction**”), and the Lender shall have [\*\*\*] days from the date of such notice to elect, by written notice to the Borrower, to convert the Loans or require the Prepayment, which election shall be irrevocable and may be made contingent on the closing of the Equity Financing or Change of Control, as applicable. The Borrower shall include in the Notice of Transaction the number of voting securities of the Borrower anticipated to be issued and outstanding following the consummation of the Equity Financing or immediately prior to the Change of Control.

(ii) Stock Certificates. The Borrower shall, as soon as practicable following consummation of an Equity Financing or Change of Control for which Lender has elected to convert the Loans as permitted hereunder, issue and deliver to the 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 Equity Financing or the Change of Control, as applicable. 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.

(iii) Registration of Borrower Securities Issued Hereunder. Concurrently with the execution of this Agreement, Borrower and Lender and an Affiliate of Lender are entering into a Registration Rights Agreement, dated as of even date herewith.

(iv) Charges, Taxes and Expenses. Issuance of a certificate for shares of Borrower Securities upon conversion of the Loans shall be made without charge to the Lender for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Borrower, and such certificate shall be issued in the name of the Lender, or such certificates shall be issued in such name or names as may be directed by the Lender. The Lender shall execute such documents, and perform such acts, which are reasonably required to assure that the conversion hereof is consummated in compliance with all applicable laws.

(v) No Rights as Stockholder. The conversion rights set forth in this Agreement do not entitle the Lender to any voting rights or other rights as a stockholder of the Borrower prior to the conversion of the Loans into Borrower Securities pursuant to the terms of this Agreement.

(vi) Restricted Securities. The Lender acknowledges that the Borrower Securities acquired upon the conversion of the Loan will be subject to restrictions upon resale

(vii) imposed by state and federal securities laws and may be subject to transfer restrictions set

forth in the Borrower's bylaws or in one or more agreements that may be entered into by and among the Borrower, the Lender and the holders of the Borrower Securities.

(e) Repayment; Optional Prepayment. If the Loans are not fully repaid, prepaid or converted into Borrower Equity pursuant to Section 2(c) prior to the Maturity Date, the remaining Loans will automatically mature and, at the Lender's sole option and discretion, (i) the Conversion Shares, (ii) the Prepayment amount, or (iii) a combination of shares under clause (i) and cash under clause (ii) up to the aggregate value of 200% of the principal amount of the Loans then outstanding plus all accrued and unpaid interest thereon, shall become due and payable (or issuable with respect to Conversion Shares) upon written demand by the Lender, which demand may be made at any time on or after the Maturity Date. In addition to the Prepayment at Ligand's option in accordance with Section 2, concurrently with the closing of, or any time after, an Equity Financing, Viking may prepay a portion of or the entire then outstanding principal amount of the Loans plus all accrued and previously unpaid interest thereon in cash, Conversion Shares or a combination thereof (provided that the form of payment and mix of cash and Conversion Shares shall be at the Lender's sole election and discretion) equal to an amount that shall equal 200% of the principal amount of the Loans then outstanding plus all accrued and previously unpaid interest thereon.

(f) Interest Rate; Default Rate. Subject to this Section 2(f), the principal amount outstanding under the Loans shall accrue interest at a fixed per annum rate of the lesser of (a) five percent (5.0%) and (b) the maximum interest rate permitted by law, which interest shall accrue on each Loan commencing on, and including, the funding date of such Loan (the "**Funding Date**"), and shall accrue on the principal amount outstanding under such Loan through and including the day on which such Loan is paid (or converted into Borrower Securities) in full. Interest shall be computed on the basis of a three hundred sixty (360) day year consisting of twelve (12) months of thirty (30) days. Upon the occurrence and during the continuance of an Event of Default and upon written notice to the Borrower from the Lender, Obligations shall accrue interest at a fixed per annum rate of the lesser of (a) eight percent (8%) and (b) the maximum interest rate permitted by law (the "**Default Rate**"). Payment or acceptance of the increased interest rate provided in this Section 2(f) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Borrower.

(g) Cash Payments. Except as otherwise expressly provided herein, all cash payments by Borrower under this Agreement or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made to the Lender at Lender's office in immediately available funds on the date specified herein. All cash payments to be made by Borrower hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds.

(h) Withholding. Payments received by the Lender from Borrower hereunder will be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any governmental authority (including any interest, additions to tax or penalties applicable thereto), except as required by law.

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

13. Lock-Up Period. The original Lender hereby agrees that it shall not, to the extent requested by Borrower or an underwriter of securities of Borrower, sell or otherwise transfer or dispose of Borrower Equity Securities then or thereafter owned by the original Lender for up to the earlier of (i) 270 days from the date of conversion of the Secured Promissory Note into Borrower Equity Securities pursuant to Section 2 or (ii) one year following the date of the final prospectus filed with the Securities and Exchange Commission relating to an effective registration statement of Borrower filed under the Securities Act in connection with an Initial Public Offering (the "**Lock-Up Period**"). For purposes of this Section 13, the term "Borrower" shall include any wholly-owned subsidiary of Borrower into which Borrower merges or consolidates. In order to enforce the foregoing covenant, Borrower shall have the right to impose stop-transfer instructions with respect to Borrower Equity Securities until the end of such Lock-Up Period. The original Lender further agrees to enter into any agreement reasonably required by any underwriter to implement the foregoing provisions within any reasonable timeframe so requested.

4. Assignment. Section 25(f) of the Agreement shall be amended and restated to read in its entirety as follows:

(f) This Agreement shall be binding upon and inure to the benefit of each party hereto and its successors and permitted assigns. Neither this Agreement nor the Secured Promissory Note may be assigned by Borrower without the prior written consent of Ligand, except that Borrower may assign this Agreement along with the Secured Promissory Note to one or more of its Affiliates, without Lender's prior consent. Lender may assign this Agreement or the Secured Promissory Note at any time without Borrower's prior consent.

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

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

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

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

BORROWER:

**VIKING THERAPEUTICS, INC.**

By: /s/ Brian Lian  
Name: Brian Lian  
Title: Chief Executive Officer

LENDER:

**LIGAND PHARMACEUTICALS INCORPORATED**

By: /s/ John Higgins  
Name: John Higgins  
Title: Chief Executive Officer

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

I, John L. Higgins, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers 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 officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 5, 2015

/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, Melanie J. Herman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers 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 officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 5, 2015

/s/ Melanie J. Herman

---

Melanie J. Herman

Chief Accounting Officer and Interim 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 for the quarter ended June 30, 2015, 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: August 5, 2015

/s/ John L. Higgins

---

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

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

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER**

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended June 30, 2015, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Melanie J. Herman, Chief Accounting Officer and Interim 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: August 5, 2015

/s/ Melanie J. Herman

Melanie J. Herman

*Chief Accounting Officer and Interim 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.