LIGAND PHARMACEUTICALS INC
Form 10-Q
August 04, 2016
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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x Quarterly Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934
For the quarterly period ended June 30, 2016
or
o Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the Transition Period From _____ to _____ .
Commission File Number: 001-33093

LIGAND PHARMACEUTICALS INCORPORATED
(Exact name of registrant as specified in its charter)

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

(858) 550-7500
(Registrant's Telephone Number, Including Area Code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o
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 x No o
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 x	Accelerated Filer o
Non-Accelerated Filer o (Do not check if a smaller reporting company)	Smaller Reporting Company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x
As of August 1, 2016, the registrant had 20,854,368 shares of common stock outstanding.

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LIGAND PHARMACEUTICALS INCORPORATED
QUARTERLY REPORT

FORM 10-Q

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GLOSSARY OF TERMS AND ABBREVIATIONS

Abbreviation	Definition
2019 Convertible Senior Notes	$245.0 million aggregate principal amount of convertible senior unsecured notes due 2019
Amgen	Amgen, Inc.
AOCI	Accumulated Other Comprehensive Income
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Company	Ligand Pharmaceuticals Incorporated, including subsidiaries
CorMatrix	CorMatrix Cardiovascular, Inc.
CVR	Contingent value right
CyDex	CyDex Pharmaceuticals, Inc.
Amended ESPP	Employee Stock Purchase Plan, as amended and restated
Eisai	Eisai Incorporated
EMA	European Medicines Agency
FASB	Financial Accounting Standards Board
FDA	Food and Drug Administration
FSGS	Focal segmental glomerulosclerosis
GAAP	Generally accepted accounting principles in the United States
IPO	Initial public offering
IPR&D	In-Process Research and Development
Ligand	Ligand Pharmaceuticals Incorporated, including subsidiaries
LSA	Loan and Security Agreement
Metabasis	Metabasis Therapeutics, Inc.
MLA	Master License Agreement
NOLs	Net Operating Losses
OMT	OMT, Inc. or Open Monoclonal Technology, Inc.
Par	Par Pharmaceuticals, Inc.
Pfizer	Pfizer Inc.
Retrophin	Retrophin Inc.
SEC	Securities and Exchange Commission
Selexis	Selexis, SA
TPE	Third-party evidence
VIE	Variable interest entity
Viking	Viking Therapeutics
Viking IPO	Viking's initial public offering
VSOE	Vendor-specific objective evidence

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PART I. FINANCIAL INFORMATION
ITEM 1. FINANCIAL STATEMENTS
LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands, except share data)

	June 30, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$61,350	$97,428
Short-term investments	45,603	102,791
Accounts receivable	9,966	6,170
Note receivable from Viking Therapeutics	3,207	4,782
Inventory	3,835	1,633
Other current assets	2,602	1,908
Total current assets	126,563	214,712
Deferred income taxes	161,076	216,564
Investment in Viking Therapeutics	18,733	29,728
Intangible assets, net	210,142	48,347
Goodwill	72,360	12,238
Commercial license rights, net	26,141	8,554
Property and equipment, net	1,181	372
Other assets	603	27
Total assets	$616,799	$530,542
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$2,336	$4,083
Accrued liabilities	4,951	5,397
Current contingent liabilities	5,337	10,414
Current lease exit obligations	239	934
2019 convertible senior notes, net	207,363	—
Other current liabilities	121	8
Total current liabilities	220,347	20,836
2019 convertible senior notes, net	—	201,985
Long-term contingent liabilities	4,138	3,033
Other long-term liabilities	398	297
Total liabilities	224,883	226,151
Commitments and Contingencies		
Stockholders' equity:		
Common stock, $0.001 par value; 33,333,333 shares authorized; 20,853,127 and 19,949,012 shares issued and outstanding at June 30, 2016 and December 31, 2015, respectively	21	20
Additional paid-in capital	789,315	701,478
Accumulated other comprehensive income	3,745	4,903
Accumulated deficit	(401,165)	(402,010)
Total stockholders' equity attributable to Ligand Pharmaceuticals	391,916	304,391
Total liabilities and stockholders' equity	$616,799	$530,542

See accompanying notes.

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

	Three months ended		Six months ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Revenues:				
Royalties	$9,754	$6,606	$24,144	$16,893
Material sales	3,886	10,681	9,227	14,410
License fees, milestones and other revenues	5,881	1,131	15,798	1,717
Total revenues	19,521	18,418	49,169	33,020
Operating costs and expenses:				
Cost of sales [1]	720	2,600	1,675	3,673
Amortization of intangibles	2,681	594	5,206	1,188
Research and development	4,507	3,416	8,508	6,784
General and administrative	6,863	7,225	13,691	13,219
Lease exit and termination costs	374	218	618	441
Total operating costs and expenses	15,145	14,053	29,698	25,305
Income from operations	4,376	4,365	19,471	7,715
Other (expense) income:				
Interest expense, net	(3,051)	(2,969)	(6,055)	(5,945)
Increase in contingent liabilities	(332)	(7,274)	(1,638)	(7,277)
Gain on deconsolidation of Viking Therapeutics	—	28,190	—	28,190
Loss from Viking Therapeutics	(11,138)	(870)	(12,743)	(870)
Other income, net	501	850	892	404
Total other (expense) income, net	(14,020)	17,927	(19,544)	14,502
Income (loss) before income taxes	(9,644)	22,292	(73)	22,217
Income tax benefit (expense)	3,881	(265)	187	(279)
(Loss) income from operations	(5,763)	22,027	114	21,938
Discontinued operations:				
Gain on sale of Oncology Product Line before income taxes	—	—	1,139	—
Income tax expense on discontinued operations	—	—	(408)	—
Income from discontinued operations	—	—	731	—
Net (loss) income including noncontrolling interests:	(5,763)	22,027	845	21,938
Less: Net loss attributable to noncontrolling interests	—	(1,537)	—	(2,380)
Net (loss) income	$(5,763)	$23,564	$845	$24,318
Per share amounts attributable to Ligand common shareholders:				
Basic earnings (loss) per share data				
(Loss) income from continuing operations	$(0.28)	$1.19	$0.01	$1.24
Income from discontinued operations	—	—	0.03	—
Net (loss) income	$(0.28)	$1.19	$0.04	$1.24
Diluted earnings per share data				
(Loss) income from continuing operations	$(0.28)	$1.11	$0.01	$1.16
Income from discontinued operations	—	—	0.03	—
Net (loss) income	$(0.28)	$1.11	$0.04	$1.16

Shares used for computation (in thousands)				
Basic	20,832	19,725	20,765	19,668
Diluted	20,832	21,276	22,615	20,953

(1) Excludes amortization of intangibles.

See accompanying notes.

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

	Three months ended June 30,		Six months ended June 30,	
	2016	2015	2016	2015
Net (loss) income:	$(5,763)	$23,564	$845	$24,318
Unrealized net gain (loss) on available-for-sale securities, net of tax	539	3,230	(559)	7,844
Less: Reclassification of net realized gains included in net (loss) income, net of tax	(364)	(1,300)	(600)	(1,533)
Comprehensive income (loss)	$(5,588)	$25,494	$(314)	$30,629

See accompanying notes.

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

	Six months ended June 30,	
	2016	2015
Operating activities		
Net income including noncontrolling interests	$845	$21,938
Less: gain from discontinued operations	731	—
Income from continuing operations	114	21,938
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:		
Non-cash change in estimated fair value of contingent liabilities	1,638	7,277
Realized gain on sale of short-term investment	(602)	(502)
Gain on write-off of assets	133	—
Depreciation and amortization	5,388	1,296
Amortization of discount on investments, net	331	(34)
Amortization of debt discount and issuance fees	5,378	5,058
Stock-based compensation	8,359	6,675
Deferred income taxes	187	268
Accretion of note payable	—	16
Gain on deconsolidation of Viking Therapeutics	—	(28,190)
Change in fair value of the Viking convertible debt receivable and warrants	(310)	—
Loss from Viking Therapeutics	12,743	870
Changes in operating assets and liabilities:		
Accounts receivable	(3,791)	7,102
Inventory	(2,202)	(533)
Other current assets	(629)	(462)
Other long-term assets	(42)	(598)
Accounts payable and accrued liabilities	(3,323)	(3,107)
Restricted investments	—	661
Deferred revenue	113	(110)
Net cash provided by operating activities	23,485	17,625
Investing activities		
Purchase of commercial license rights	(17,691)	(4,030)
Payments to CVR holders and other contingency payments	(5,635)	(3,663)
Purchases of property and equipment	(1,021)	(27)
Cash paid for acquisition, net of cash acquired	(92,504)	—
Purchase of short-term investments	(49,892)	(60,432)
Purchase of Viking common stock and warrants	(700)	(9,000)
Proceeds from sale of property and equipment	—	1
Proceeds received from repayment of Viking note receivable	300	—
Reduction of cash due to deconsolidation of Viking	—	(247)
Proceeds from sale of short-term investments	22,077	2,378
Proceeds from maturity of short-term investments	83,523	—

Net cash used in investing activities	(61,543)	(75,020)
Financing activities		
Net proceeds from stock option exercises and ESPP	2,482	5,430
Purchase of common stock for RSU vesting	(502)	—
Net cash provided by financing activities	1,980	5,430
Net decrease in cash and cash equivalents	(36,078)	(51,965)
Cash and cash equivalents at beginning of period	97,428	160,203
Cash and cash equivalents at end of period	$61,350	$108,238

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Supplemental disclosure of cash flow information		
Interest paid	$ 919	$ 903
Taxes paid	36	13
Supplemental schedule of non-cash activity		
Stock issued for acquisition, net of issuance cost	(77,615)	—
Stock and warrant received for repayment of Viking notes receiveable	1,200	—
Unrealized gain (loss) on AFS investments	(1,198)	7,844

See accompanying notes

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

1. Significant Accounting Principles

Business

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

Principles of Consolidation

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

Basis of Presentation

The Company’s accompanying unaudited condensed consolidated financial statements have been prepared in accordance with GAAP for interim financial information. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation of the financial position and results of operations of the Company and its subsidiaries, have been included. Interim financial results are not necessarily indicative of the results that may be expected for the full year. These financial statements should be read in conjunction with the consolidated financial statements and notes therein included in the Company’s annual report on Form 10-K for the year ended December 31, 2015.

Use of Estimates

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

Reclassifications

Certain reclassifications have been made to the previously issued balance sheet and statement of operations for the three and six months ended June 30, 2015 for comparability purposes. These reclassifications had no effect on the reported net income, stockholders' equity, and operating cash flows as previously reported.

Income (Loss) Per Share

Basic income (loss) per share is calculated by dividing net income by the weighted-average number of common shares outstanding during the period. Diluted income (loss) per share is computed by dividing net income by the weighted-average number of common shares and common stock equivalents of all dilutive securities calculated using the treasury stock method and the if-converted method. The total number of potentially dilutive securities including stock options and warrants excluded from the computation of diluted income per share because their inclusion would have been anti-dilutive was 3.5 million for the period ended June 30, 2015. In loss periods, basic net loss per share and diluted net loss per share are identical since the effect of otherwise dilutive potential common shares is anti-dilutive and therefore excluded.

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

	Three months ended June 30,		Six months ended June 30,	
	2016	2015	2016	2015
Net (loss) income from continuing operations	$(5,763)	$ 23,564	$114	$ 24,318
Net income from discontinued operations	—	—	731	—
Net (loss) income	$(5,763)	$ 23,564	$845	$ 24,318
Shares used to compute basic income per share	20,831,809	19,725,410	20,765,025	19,568,183
Dilutive potential common shares:				
Restricted stock	—	42,836	86,419	52,187
Stock options	—	1,044,926	785,921	1,001,147
2019 convertible senior notes	—	463,232	977,339	231,617
Shares used to compute diluted income per share	20,831,809	21,276,404	22,614,703	20,853,134
Basic per share amounts:				
(Loss) income from continuing operations	$(0.28)	$ 1.19	$0.01	$ 1.24
Income from discontinued operations	—	—	0.03	—
Basic net (loss) income per share	$(0.28)	$ 1.19	$0.04	$ 1.24
Diluted per share amounts:				
(Loss) income from continuing operations	$(0.28)	$ 1.11	$0.01	$ 1.16
Income from discontinued operations	—	—	0.03	—
Diluted net (loss) income per share	$(0.28)	$ 1.11	$0.04	$ 1.16

Cash Equivalents

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

Short-term Investments

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

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The following table summarizes the various investment categories at June 30, 2016 and December 31, 2015 (in thousands):

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
June 30, 2016				
Short-term investments				
Bank deposits	$ 10,000	$ 28	$ —	$ 10,028
Corporate bonds	23,210	174	(1)	23,383
Commercial paper	6,665	3	—	6,668
Asset backed securities	695	—	—	695
Corporate equity securities	1,700	3,129	—	4,829
	$ 42,270	$ 3,334	$ (1)	$ 45,603
December 31, 2015				
Short-term investments				
Bank deposits	$ 43,043	$ —	$ (4)	$ 43,039
Corporate bonds	41,238	—	(35)	41,203
Commercial paper	1,747	—	—	1,747
Asset backed securities	10,020	—	(5)	10,015
Corporate equity securities	1,843	4,944	—	6,787
	$ 97,891	$ 4,944	$ (44)	$ 102,791

Inventory

Inventory, which consists of finished goods, is stated at the lower of cost or market value. The Company determines cost using the first-in, first-out method. Inventory levels are analyzed periodically and written down to its net realizable value if it has become obsolete, has a cost basis in excess of its expected net realizable value or is in excess of expected requirements. There were no write downs related to obsolete inventory recorded for the three and six months ended June 30, 2016 and 2015.

Goodwill and Other Identifiable Intangible Assets

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

	June 30, 2016	December 31, 2015
Indefinite lived intangible assets		
Acquired IPR&D	$ 12,556	$ 12,556
Goodwill	72,360	12,238
Definite lived intangible assets		
Complete technology	182,267	15,267
Less: Accumulated amortization	(8,161)	(3,762)
Trade name	2,642	2,642
Less: Accumulated amortization	(718)	(652)
Customer relationships	29,600	29,600
Less: Accumulated amortization	(8,044)	(7,304)

Total goodwill and other identifiable intangible assets, net	$282,502	$60,585

As Discussed in Note 2-Business Combination, on January 8, 2016, the Company completed its acquisition of OMT. As a result of the transaction, the Company recorded $167.0 million of intangibles with definite lives and goodwill of $60.1 million. Amortization of definite-lived intangible assets is computed using the straight-line method over the estimated useful

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life of the asset of 20 years. Amortization expense of $2.7 million and $5.2 million was recognized for the three and six months ended June 30, 2016, respectively. Amortization expense of $0.6 million and $1.2 million was recognized for the three and six months ended June 30, 2015, respectively.

The Company tests the carrying value of goodwill in accordance with accounting rules on impairment of goodwill, which require that the Company estimate the fair value of the reporting unit annually, or when impairment indicators exist, and compare such amounts to their respective carrying values to determine if an impairment is required. The Company performed its annual assessment for goodwill impairment for the year ended December 31, 2015, noting no impairment.

Commercial License Rights

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

	June 30, 2016	December 31, 2015
CorMatrix	$17,692	$ —
Selexis	8,602	8,602
	26,294	8,602
Less: accumulated amortization	(153)	(48)
Total commercial rights, net	$26,141	$ 8,554

Commercial license rights represent a portfolio of future milestone and royalty payment rights acquired from Selexis in April 2013 and April 2015 and CorMatrix in May 2016. Individual commercial license rights acquired 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, 2016, management does not believe there have been any events or circumstances indicating that the carrying amount of its commercial license rights may not be recoverable.

Relationships between the CorMatrix Parties

As previously disclosed in Ligand’s filings, Jason Aryeh is a director of both Ligand and CorMatrix. Mr. Aryeh beneficially owns equity of CorMatrix representing approximately .56% of CorMatrix’s outstanding equity. Mr. Aryeh recused himself from all of the board’s consideration of the Purchase Agreement, including any financial analysis, the terms of the Purchase Agreement and the vote to approve the Purchase Agreement and the related transactions.

Property and Equipment

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

	June 30, 2016	December 31, 2015
Lab and office equipment	$1,063	$ 2,248
Leasehold improvements	929	273
Computer equipment and software	692	632
	2,684	3,153

Less accumulated depreciation and amortization	(1,503)	(2,781)
Total property and equipment, net	$1,181	$ 372

Depreciation of equipment is computed using the straight-line method over the estimated useful lives of the assets, which range from three to ten years. Leasehold improvements are amortized using the straight-line method over the shorter of the estimated useful lives or the related lease term. Depreciation expense of $0.1 million was recognized for each of the six months ended June 30, 2016 and 2015, which is included in operating expenses.

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Other Current Assets

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

	June 30, 2016	December 31, 2015
Prepaid expenses	$2,122	$ 1,177
Other receivables	480	731
Total other current assets	$2,602	$ 1,908

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	June 30, 2016	December 31, 2015
Compensation	$1,463	$ 1,711
Professional fees	828	726
Amounts owed to former licensees	852	915
Royalties owed to third parties	1,037	823
Other	771	1,222
Total accrued liabilities	$4,951	$ 5,397

Other Long-Term Liabilities

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

	June 30, 2016	December 31, 2015
Deposits	$42	$ 268
Deferred rent	326	—
Other	30	29
Total other long-term liabilities	$398	$ 297

Contingent Liabilities

In connection with the Company’s acquisition of CyDex in January 2011, the Company recorded a contingent liability, for amounts potentially due to holders of the CyDex CVRs and former license holders. The liability is periodically assessed based on events and circumstances related to the underlying milestones, royalties and material sales. Any change in fair value is recorded in the Company’s consolidated statement of operations. The carrying amount of the liability may fluctuate significantly and actual amounts paid under the CVR agreements may be materially different than the carrying amount of the liability. The fair value of the liability at June 30, 2016 and December 31, 2015 was $7.0 million and $9.5 million, respectively. The Company recorded a fair-value adjustment to increase the liability by $0.2 million and $0.5 million for the three and six months ended June 30, 2016, 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. The Company paid CyDex CVR holders $3.0 million and $3.2 million during the six

months ended June 30, 2016 and 2015, respectively.

In connection with the Company's acquisition of Metabasis in January 2010, the Company issued to Metabasis stockholders four tradable CVRs, one CVR from each of four respective series of CVR, for each Metabasis share. The CVRs will entitle Metabasis stockholders to potential 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

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triggering events. The fair values of the CVRs are remeasured at each reporting date through the term of the related agreement. Any change in fair value is recorded in the Company's consolidated statement of operations. The carrying amount of the liability may fluctuate significantly based upon quoted market prices and actual amounts paid under the agreements may be materially different than the carrying amount of the liability. The fair value of the liability was estimated to be $2.5 million and $4.0 million as of June 30, 2016 and December 31, 2015, respectively. The Company recorded an increase in the liability for Metabasis-related CVRs of $0.1 million and $1.2 million for the three and six months ended June 30, 2016. The Company recorded an increase of $6.4 million and $5.3 million for the three and six months ended June 30, 2015, respectively. The Company paid Metabasis CVR holders $2.6 million for the six months ended June 30, 2016. No payments were made to Metabasis CVR holders for the six months ended June 30, 2015.

Revenue Recognition

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

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

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

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

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

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

collectability is reasonably assured. If these criteria are not met, the milestone payment is recognized over the remaining period of the Company's performance obligations under the arrangement.

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

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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 June 30,		Six months ended June 30,	
	2016	2015	2016	2015
Stock-based compensation expense as a component of:				
Research and development expenses	$1,682	$1,253	$3,267	$2,174
General and administrative expenses	2,558	2,507	5,092	4,501
	$4,240	$3,760	$8,359	$6,675

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 June 30,		Six months ended June 30,	
	2016	2015	2016	2015
Risk-free interest rate	1.7%	1.7%	1.5%	1.8%
Dividend yield	—	—	—	—
Expected volatility	49%	58%	50%	58%
Expected term	6.7	6.6	6.6	6.6
Forfeiture rate	5.0%	8.5%	5.0%	8.5%

Income Taxes

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

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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 assessment of its VIEs to determine whether the Company has a controlling financial interest in any VIE and therefore is the primary beneficiary. If the Company is the primary beneficiary of a VIE, it consolidates the VIE under applicable accounting guidance. If the Company is no longer the primary of a VIE or the entity is no longer considered as a VIE as facts and circumstances change, it deconsolidates the entity under the applicable accounting guidance. In May 2015, the Company deconsolidated Viking, a previously reported VIE, and elected to record its investment in Viking under the equity method of accounting as Viking is no longer considered a VIE and the Company does not have voting control or other elements of control that would require consolidation. The investment is subsequently adjusted for the Company’s share of Viking's operating results and if applicable, cash contributions and distributions, which is reported on a separate line in our condensed consolidated statement of operations called “Loss from 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 4, Investment in Viking Therapeutics, for additional details.

Convertible Debt

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

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes the revenue recognition requirements in ASC 605, Revenue Recognition. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The new guidance establishes a five-step model to achieve that core principle and also requires additional disclosures about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts. ASU 2014-09 is effective for interim and annual reporting periods beginning after December 15, 2017. Early application is permitted after December 15, 2016.

In March 2016, the FASB issued ASU 2016-08, Principal versus Agent Considerations (Reporting Revenue Gross versus Net), which clarifies the implementation guidance on principal versus agent considerations, and ASU 2016-10, Identifying Performance Obligations and Licensing, which clarifies the identification of performance obligations and the licensing implementation guidance.

In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers (Topic 606) - Narrow-Scope Improvements and Practical Expedients, which clarifies guidance on assessing collectibility, presenting sales taxes and other similar taxes collected from customers, measuring noncash consideration, and certain transition matters. The Company is currently evaluating the effect the adoption of ASU 2014-09, ASU 2015-14, ASU 2016-08, ASU

2016-10, and ASU 2016-12 will have on the Company's financial statements.

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

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

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

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

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments which requires that expected credit losses relating to financial assets measured on an amortized cost basis and available-for-sale debt securities be recorded through an allowance for credit losses. ASU 2016-13 limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and also requires the reversal of previously recognized credit losses if fair value increases. The new standard will be effective for us on January 1, 2020. Early adoption will be available on January 1, 2019. We are currently evaluating the effect that the updated standard will have on our consolidated financial statements.

2. Business Combination

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

The aggregate acquisition consideration was $173.4 million, consisting of (in thousands):

Cash consideration	$96,006
Total share consideration:	
Actual number of shares issued	790
Multiplied by: Ligand closing share price on January 8, 2016	$97.92
Total share consideration	77,373

Total consideration	$173,379

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

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

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Cash and cash equivalents	$3,504
Accounts receivable	5
Income tax receivable	140
Prepaid expenses and other current assets	2
Deferred tax liabilities, net	(56,114)
Intangible asset with finite life - core technology	167,000
Liabilities assumed	(1,279)
Goodwill	60,121
Total consideration	$173,379

The fair value of the core technology, or OMT's OmniAb technology, was based on the discounted cash flow method that estimated the present value of a hypothetical royalty stream derived from the licensing of the OmniAb technology. These projected cash flows were discounted to present value using a discount rate of 15.5%. The fair value of the core technology is being amortized on a straight-line basis over the estimated useful life of 20 years.

The excess of the acquisition date consideration over the fair values assigned to the assets acquired and the liabilities assumed and recorded $60.1 million as goodwill, which is not deductible for tax purposes and is primarily attributable to OMT’s potential revenue growth from combining the OMT and Ligand businesses and workforce, as well as the benefits of access to different markets and customers.

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

The following table presents supplemental pro forma information for the three and six months ended June 30, 2016 and June 30, 2015, as if the acquisition of OMT had occurred on January 1, 2015 (in thousands except for EPS):

	Three months ended		Six months ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Revenue	$21,997	$19,818	$51,645	$36,971
Net (loss) income	$(3,443)	$19,483	$3,165	$18,166
Basic (loss) income per share:	$(0.17)	$0.99	$0.15	$0.92
Diluted (loss) income per share:	$(0.17)	$0.92	$0.14	$0.87

The unaudited pro forma consolidated results include pro forma adjustments that assume the acquisition occurred on January 1, 2015. The primary adjustments include: (i) the $0.3 million and $0.6 million for the three and six months ended June 30, 2015, respectively, for share based compensation expenses related to the stock awards issued to the retained OMT employees after the acquisition, (ii) additional intangible amortization expense of $2.1 million and $4.2 million was included in the three and six months ended June 30, 2015, respectively and (iii) a platform license fee of $3.0 million paid by OMT during the three and six months ended June 30, 2015. The license agreement was terminated upon acquisition by Ligand. The adjustments also include $2.5 million license revenue recognized by OMT from January 1, 2016 to the acquisition date. The unaudited pro forma consolidated results are not necessarily indicative of what our consolidated results of operations actually would have been had we completed the acquisition on January 1, 2015. In addition, the unaudited pro forma consolidated results do not purport to project the future results of operations of the combined company nor do they reflect the expected realization of any cost savings

associated with the acquisition.

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3. Fair Value Measurements

The Company measures certain financial assets and liabilities at fair value on a recurring basis. Fair value is a market-based measurement that should be determined using assumptions that market participants would use in pricing an asset or liability. The Company establishes a three-level hierarchy to prioritize the inputs used in measuring fair value. The levels are described below with level 1 having the highest level input that is significant to the measurement and level 3 having the lowest:
Level 1 - Quoted prices in active markets;
Level 2 - Inputs other than the quoted prices in active markets that are observable either directly or indirectly; and
Level 3 - Unobservable inputs in which there is little or no market data, which require the Company to develop its own assumptions.
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, 2016 (in thousands). There were no transfers between Level 1 and Level 2 securities during the six months ended June 30, 2016:

	Fair Value Measurements at Reporting Date Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Short-term investments [2]	$44,908	$ 4,829	$ 40,079	$ —
Note receivable Viking [3]	3,207	—	—	3,207
Investment in warrants [4]	532	532	—	—
Total assets	$48,647	$ 5,361	$ 40,079	$ 3,207
Liabilities:				
Current contingent liabilities-CyDex [5]	$5,337	$ —	$ —	$ 5,337
Long-term contingent liabilities-CyDex [5]	1,634	—	—	1,634
Long-term contingent liabilities-Metabasis [6]	2,504	—	2,504	—
Liability for amounts owed to former licensees[7]	611	611	—	—
Total liabilities	$10,086	$ 611	$ 2,504	$ 6,971

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

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

(1) Highly liquid investments with maturities less than 90 days from the purchase date are recorded as cash equivalents that are classified as Level 2 of the fair value hierarchy, as these investment securities are valued based upon quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.

(2) Investments in equity securities, which the Company received as a result of event-based and upfront payments from licensees, are classified as level 1 as the fair value is determined using quoted market prices in active markets for the same securities. Short-term investments in marketable securities with maturities greater than 90 days are classified as level 2 of the fair value hierarchy, as these investment securities are valued based upon quoted prices for identical or 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, 2016. Changes in these assumptions may materially affect the fair value estimate.

(4) Investment in warrants, which the Company received as a result of Viking's partial repayment of the Viking note receivable and the Company's purchase of Viking common stock and warrants in April 2016, are classified as level 1 as the fair value is determined using quoted market prices in active markets for the same securities.

(5) 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.

(6) The liability for CVRs for Metabasis are determined using quoted market prices in an inactive market for the underlying CVR.

(7) 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.

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

	June 30, 2016	December 31, 2015
Range of annual revenue subject to revenue sharing [1]	$24.2 million	$22.5 million
Revenue volatility	25%	25%
Average probability of commercialization	82%	73%
Sales beta	0.30	0.40
Credit rating	BB	BB
Equity risk premium	6%	6%

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

A reconciliation of the level 3 financial instruments as of June 30, 2016 is as follows (in thousands):

Assets:	
Fair value of level 3 financial instrument assets as of December 31, 2015	$4,782
Viking note receivable fair market value adjustment	(215)
Cash payment received as partial repayment of note receivable	(300)
Fair market value of stock received as partial repayment of note receivable	(1,060)
Fair value of level 3 financial instrument assets as of June 30, 2016	$3,207
Liabilities:	
Fair value of level 3 financial instrument liabilities as of December 31, 2015	$9,490
Payments to CVR and other former license holders	(2,992)
Fair value adjustments to contingent liabilities	473
Fair value of level 3 financial instrument liabilities as of June 30, 2016	$6,971

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 $408.5 million as of June 30, 2016. The carrying value of the notes does not reflect the market rate. See Note 6 Financing Arrangements for additional information.

Viking Therapeutics

The Company records its investment in Viking under the equity method of accounting. The investment is subsequently adjusted for the Company's share of Viking's operating results, and if applicable, cash contributions and distributions. See Note 4 Investment in Viking Therapeutics for additional information. The market value of the Company's investment in Viking was $7.9 million as of June 30, 2016. The carrying value of the investment in Viking does not reflect the market value.

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4. Investment in Viking Therapeutics

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

In May 2015, Viking completed the Viking IPO and issued the Company approximately 3.7 million shares of Viking common stock with an aggregate value of $29.2 million based on the IPO price of $8.00 per share. In connection with the Viking IPO, the Company purchased 1.1 million shares of Viking common stock for an aggregate price of $9.0 million at the initial public offering price. Upon completion of Viking’s IPO, the Company determined that Viking was no longer a VIE and the Company did not have any other element of control that would require consolidation of Viking. In May 2015, the Company deconsolidated Viking and began to account for its equity investment in Viking under the equity method and records its proportional share of Viking gains and losses in Loss from Viking Therapeutics in the Company's consolidated statement of operations. The Company owned an aggregate of 32.7% of the outstanding common stock of Viking at June 30, 2016.

In January 2016, the Company entered into an amendment to the LSA with Viking to extend the maturity of the convertible loan to May 2017, reduce the interest rate from 5.0% to 2.5%, and extend the lock up period by one year such that the Company may not sell, transfer, or dispose of any Viking securities prior to January 23, 2017. Additionally, upon the consummation of a subsequent capital financing transaction, Viking will be required to repay $1.5 million of the Viking Note obligation to the Company, with at least $0.3 million to be paid in cash and the remaining amount to be paid in the form and at the price of the Viking equity securities sold in the financing transaction. Upon maturity or further payments, the Company may elect to receive equity of Viking common stock or cash equal to 200% of the principal amount plus accrued and unpaid interest. The Company has opted to account for the Viking convertible note receivable at fair value.

In April 2016, Viking closed its underwritten public offering of 7.5 million shares of common stock and warrants to purchase up to 7.5 million shares of its common stock at a price of $1.25 per share of its common stock and related warrants. The warrant has an exercise price of $1.50 per share, immediately exercisable and will expire on April 13, 2021. As part of this public offering, the Company purchased 560,000 shares of common stock and warrants to purchase 560,000 shares of Viking's common stock for a total purchase price of $0.7 million. The purchased shares of common stock and warrants are subject to the same terms as the shares issued in this offering. In addition, on April 13, 2016, pursuant to the terms of the amendment to the LSA that was entered in January 2016 between Ligand and Viking (see details in Note 4), Viking repaid $0.3 million of the convertible notes in cash, and issued the Company 960,000 shares of its common stock and warrants to purchase 960,000 shares of its common stock as repayment of $1.2 million of the convertible notes. The shares received as part of the repayment, like all Viking securities held by the Company, are subject to a lock-up period that ends on January 23, 2017 in accordance with the amended LSA. A gain of $0.5 million representing the fair market value of the warrants is included within other income for the quarter ended June 30, 2016. As of June 30, 2016, the aggregate fair market value of the note receivable was $3.2 million. The Company recorded a $0.2 million decrease in the fair value of the Viking convertible note for both the three and six months ended June 30, 2016. See Note 3, Fair Value Measurements for additional details.

The Company's ownership in Viking decreased to 32.7% after the public offering and the repayment of the convertible notes. Accordingly, the book value of the Company's equity method investment in Viking decreased by $10.0 million. The resulting net loss was recognized in Loss from Viking Therapeutics in the Company's consolidated statement of operations.

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5. Lease Obligations

The Company leases office and laboratory facilities in California, Kansas and New Jersey. These leases expire between 2016 and 2023, some of which are subject to annual rent increases which range from 3.0% to 3.5%. The Company currently subleases office and laboratory space in California and New Jersey. The following table provides a summary of operating lease obligations and payments expected to be received from sublease agreements as of June 30, 2016 (in thousands):

Operating lease obligations:	Lease Termination Date	Less than 1 year	1-2 years	3-4 years	Thereafter	Total
Corporate headquarters-San Diego, CA	April 2023	$74	$263	$278	$ 270	$885
Vacated office and research facility-La Jolla, CA	June 2019	708	1,474	—	—	2,182
Bioscience and Technology Business Center-Lawrence, KS	December 2017	54	27	—	—	81
Vacated office and research facility-Cranbury, NJ	August 2016	436	—	—	—	436
Total operating lease obligations		$1,272	$1,764	$278	$ 270	$3,584
Sublease payments expected to be received:						
Vacated office and research facility-La Jolla, CA	June 2019	$720	$1,400	$—	$ —	$2,120
Office and research facility-Cranbury, NJ	August 2016	35	—	—	—	35
Net operating lease obligations		$517	$364	$278	$ 270	$1,429

As of June 30, 2016 and December 31, 2015, the Company had lease exit obligations of $0.2 million and $0.9 million, respectively. For the three and six months ended June 30, 2016, the Company made cash payments, net of sublease payments received of $0.6 million and $1.2 million, respectively. The Company recognized adjustments for accretion and changes in leasing assumptions of $0.3 million and $0.5 million for the three and six months ended June 30, 2016, 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.

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6. Financing Arrangements

0.75% Convertible Senior Notes Due 2019

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

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

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

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

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

As of June 30, 2016, the Company's last reported sale price has exceeded the 130% threshold described above and accordingly the Convertible Notes have been classified as a current liability as of June 30, 2016. The determination of whether or not the Convertible Notes are convertible as described above is made each quarter until maturity, conversion or repurchase. It is possible that the Convertible Notes may not be convertible in future periods, in which case the Convertible Notes would be classified as long-term debt, unless one of the other conversion events described above were to occur.

On or after May 15, 2019 until the close of business on the second scheduled trading day immediately preceding August 15, 2019, holders of the notes may convert all or a portion of their notes at any time, regardless of the foregoing circumstances. Upon conversion, 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, 2016, the “if-converted value” exceeded the principal amount of the 2019

Convertible Senior Notes by $136.6 million.

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

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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, 2016 and December 31, 2015, net of issuance costs, was $51.3 million.

Convertible Bond Hedge and Warrant Transactions

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

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

The carrying values and the fixed contractual coupon rates of the Company's financing arrangements as of June 30, 2016 and December 31, 2015 were as follows (in thousands):

	June 30, 2016	December 31, 2015
2019 Convertible Senior Notes		
Principal amount outstanding	$245,000	$245,000
Unamortized discount	(34,673)	(39,628)
Net carrying amount	210,327	205,372
Less: Unamortized deferred financing costs	2,964	3,387
Total notes payable	$207,363	$201,985

7. Income Tax

The Company's income tax benefit from continuing operations for the three and six months ended June 30, 2016 was $3.9 million, or $0.19 per diluted share and $0.2 million or $0.01 per diluted share, respectively. The Company's income tax expense from discontinued operations for the six months ended June 30, 2016 was $0.4 million, or $0.02 per diluted share. The Company's income tax provision from continuing operations for both the three and six months ended June 30, 2015 was $0.3 million, or $0.01 per diluted share.

The Company estimates its annual effective income tax rate for continuing operations to be approximately 40.6% for 2016, compared to the 1.1% effective income tax rate for 2015. The estimated effective tax rate for 2016 is different from the federal statutory rate primarily as a result of significant permanent book-to-tax differences and state taxes. The permanent differences include non-taxable contingent consideration income (expense) recorded related to the change in market value of contingent liabilities. Any significant contingent consideration expense or income will result in a significantly higher or lower effective tax rate because contingent consideration expense is largely not deductible for tax purposes and contingent consideration income is not taxable. Other permanent differences between financial statement income and taxable income relate to items such as stock compensation, meals and entertainment charges, and compensation of officers. The primary

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difference in the estimated effective tax rate in 2016 compared to 2015 relates to the release of the Company's valuation allowance in 2015. Our estimated annual effective tax rate for the six months ended June 30, 2015 is primarily attributable to an increase in our deferred tax liability associated with the tax amortization of acquired indefinite lived IPR&D intangible assets.

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

As of June 30, 2016, the Company had unrecognized tax benefits of approximately $6.4 million related to uncertain tax positions that, if recognized, would result in adjustments to the related deferred tax assets and reduce our annual effective tax rate, subject to the remaining valuation allowance.

The Company files income tax returns in the U.S. and in various state jurisdictions with varying statutes of limitations. The Company is no longer subject to income tax examination by tax authorities for years prior to 2011; however, its net operating loss and research credit carry-forwards arising prior to that year are subject to adjustment. It is the Company's policy to recognize interest expense and penalties related to income tax matters as a component of income tax expense. As of June 30, 2016, there was no material accrued interest related to uncertain tax positions.

8. Stockholders' Equity

The Company grants options and awards to employees and non-employee directors pursuant to a stockholder approved stock incentive plan, which is described in further detail in Note 8, Stockholders' Equity, of Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

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

	Stock Options		Restricted Stock Award	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Grant Date Fair Value
Balance as of December 31, 2015	1,683,341	$ 34.23	130,749	$ 60.36
Granted	254,989	90.51	233,955	94.76
Exercised	(77,243)	30.73	(41,833)	52.18
Forfeited	(24,282)	61.99	(1,850)	71.48
Balance as of June 30, 2016	1,836,805	$ 41.83	321,021	$ 73.13

Net cash received from options exercised during the six months ended June 30, 2016 and 2015 was approximately $2.4 million and $5.3 million, respectively. Tax deductions for stock options and restricted stock which have exceeded stock based compensation expense in previous years have not been recognized by the Company. The Company will

monitor the utilization of the net operating losses and recognize the excess tax deduction when that deduction reduces taxes payable.

As of June 30, 2016, 948,729 shares were available for future option grants or direct issuance under the Company's 2002 Stock Incentive Plan, as amended.

Employee Stock Purchase Plan

The Company's Amended ESPP allows participating employees to purchase up to 1,250 shares of Ligand common stock during each offering period, but in no event may a participant purchase more than 1,250 shares of common stock during any calendar year. The length of each offering period is six months, and employees are eligible to participate in the first

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offering period beginning after their hire date. This plan is described in further detail in Note 8, Stockholders' Equity, of Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

There were 1,241 shares of common stock issued under the amended ESPP during the six months ended June 30, 2016. There were no shares of common stock issued under the amended ESPP plan during the six months ended June 30, 2015. As of June 30, 2016, 71,126 shares were available for future purchases under the Amended ESPP.

Issuance of common stock

In conjunction with the acquisition of OMT, the Company issued 790,163 shares of its common stock based on a 20-day volume-weighted average price of $107.66 of its common stock calculated three days prior to closing.

9. Litigation

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

Securities Litigation

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

Paragraph IV Certification by Par Pharmaceuticals

On January 7, 2016, the Company received a paragraph IV certification from Par Sterile Products, LLC, a subsidiary of Par Pharmaceuticals, Inc., or Par, advising us that it had filed an ANDA with the FDA seeking approval to market a generic version of Merck’s NOXAFIL-IV product. The paragraph IV certification states it is Par’s position that Merck’s U.S. Patent No. 9,023,790 related to NOXAFIL-IV and the Company's U.S. Patent No. 8,410,077 related to Captisol are invalid and/or will not be infringed by Par’s manufacture, use or sale of the product for which the ANDA was submitted. On February 19, 2016, Merck filed an action against Par in the United States District Court for the District of New Jersey, asserting that Par’s manufacture, use or sale of the product for which the ANDA was submitted would infringe Merck’s U.S. Patent No. 9,023,790. Subsequently, U.S. Patent No. 9,358,297 issued to Merck, Merck listed this patent in the Orange Book, Par amended its ANDA to include a certification that this patent was invalid, unenforceable and/or will not be infringed by Par’s ANDA product, and Par sent a supplemental Notice Letter to Merck. On July 29, 2016, Merck filed an Amended Complaint adding an assertion that Par’s ANDA filing infringed U.S. Patent No. 9,358,297. The case against Par is captioned Merck Sharpe & Dohme Corp. v. Par Sterile Products, LLC, Par Pharmaceuticals, Inc., Par Pharmaceutical Companies, Inc., and Par Pharmaceutical Holdings, Inc., No.16-cv-00948-PGS-DEA.

10. Subsequent Event

On July 28, 2016 the Company acquired less than 20% ownership interest in Nucorion, Inc., an early stage company leveraging Ligand's Liver Targeting Prodrug technology focused on developing anti-cancer and anti-viral agents initially directed to China, for $1.0 million in cash.

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

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

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

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

Overview

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

Significant Developments

Portfolio Program Progress

Promacta®/Revolade®

- Novartis announced Q2 2016 net sales of Promacta® (eltrombopag) of $158 million, a $27 million or 21% increase over Q1 2016. This is the largest quarter-over-quarter increase in net sales in the product’s history and comes one year after Novartis’s acquisition of the product from GSK in early 2015.
- The European Commission approved Revolade® (eltrombopag), a Novartis product, for the treatment of pediatric (age 1 and above) chronic immune (idiopathic) thrombocytopenic purpura (ITP) patients who are refractory to other treatments (e.g., corticosteroids, immunoglobulins). The approval includes the use of tablets as well as a new oral suspension formulation of Revolade®, which is designed for younger children who may not be able to swallow tablets.

Kyprolis® (carfilzomib), an Amgen Product Utilizing Captisol

- On July 3, 2016, Amgen announced that the European Commission approved an expanded indication for Kyprolis® (carfilzomib), to be used in combination with dexamethasone alone, for adult patients with multiple myeloma who have received at least one prior therapy.
- On July 4, 2016, Ono Pharmaceuticals, holder of Kyprolis® (carfilzomib) marketing rights in Japan, announced approval in Japan for treatment of patients with relapsed or refractory multiple myeloma.
- On May 26, 2016, Amgen announced that the Kyprolis Global Economic Model (K-GEM) was published in the Journal of Medical Economics showing that in the United States, Kyprolis® (carfilzomib) in combination with lenalidomide and dexamethasone is cost-effective compared with lenalidomide and dexamethasone alone in patients with relapsed or refractory multiple myeloma and demonstrated an incremental cost-effectiveness ratio of $107,250 per Quality-Adjusted Life Year.

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Additional Pipeline and Partner Developments

- Spectrum Pharmaceuticals announced that the FDA granted seven years of Orphan Drug Exclusivity for EVOMELA™ for use as a high-dose conditioning treatment prior to hematopoietic progenitor (stem) cell transplantation in patients with multiple myeloma.
- Coherus BioSciences announced data demonstrating the equivalence of its etanercept biosimilar (CHS-0214) to Enbrel® (etanercept), the reference product, with respect to efficacy as measured by the primary endpoint, ACR20 at 24 weeks.
- Sage Therapeutics presented data that expanded scientific, clinical and burden-of-illness data for SAGE-547 at the 68th American Academy of Neurology Annual Meeting. Data from the open-label Phase 1/2 trial of SAGE-547 in super-refractory status epilepticus (SRSE) demonstrated that the 77% key efficacy endpoint response rate was not related to age, gender, ethnicity, co-morbid medical condition or underlying antiepileptic or third-line agents. Additional data presented illustrated that SRSE has a high burden of illness with significant morbidity, lengthy hospitalizations and significant utilization of ICU and overall hospital resources.
- Oncobiologics announced that its Phase 3 clinical plan for ONS-3010 (Humira® biosimilar) received the first of its European Union clinical trial authorization approvals, including in the United Kingdom, Germany and Spain, for the biosimilarity study portion of the Phase 3 clinical program.
- Viking Therapeutics highlighted positive data from a Phase 1b trial of VK2809 (TR Beta) in subjects with mild hypercholesterolemia at the 65th Annual Scientific Session and Expo of the American College of Cardiology.
- Viking Therapeutics announced positive top-line results from a proof-of-concept study of VK0214 in a mouse model of X-linked adrenoleukodystrophy (X-ALD), showing that VK0214 rapidly reduced plasma very long chain fatty acid levels by more than 25% in treated animals compared with vehicle controls ($p < 0.01$).
- Merrimack Pharmaceuticals announced that the FDA granted seribantumab (MM-121) Fast Track designation for development in patients with heregulin-positive, locally advanced or metastatic non-small cell lung cancer (NSCLC) whose disease has progressed following immunotherapy.
- Merrimack Pharmaceuticals announced initiation of a Phase 1 study of MM-151 in combination with ONIVYDE® plus fluorouracil (5-FU) and Leucovorin in patients with RAS wild-type metastatic colorectal cancer, as well as the initiation of a biomarker-selected, multi-arm Phase 1 study for MM-151/MM-121 in metastatic colorectal, NSCLC and head and neck cancer that uses a combination of genetic and nongenetic biomarkers to match patients to appropriate novel combinations of investigational drug regimens based on their cancer's molecular signature.
- Millennium/Takeda highlighted Phase 1b data on pevonedistat + chemotherapy at the 2016 ASCO meeting.
- Opthea announced that the Phase 1 dose-escalation study of OPT-302 met its primary objective demonstrating safety and tolerability as monotherapy and in combination with the current wet AMD standard of care Lucentis®. Opthea is currently recruiting patients for its Phase 2a dose-expansion trial and expects data by the end of 2016.
- Upsher-Smith announced that it commenced the first clinical study of its CXCR4 antagonist USL311 in patients with advanced solid tumors, triggering a $500,000 milestone payment to Ligand.
- Marinus Pharmaceuticals announced that the FDA granted Orphan Drug designation to ganaxalone IV for the treatment of status epilepticus and that the company dosed the first subject in its Phase 1 clinical trial for the program.
- An OmniAb licensee broadened its access to the platform by adding OmniFlic. Prior to the option exercise, this licensee’s access to the OmniAb technology was limited to OmniRat.
- Wuxi out-licensed China rights to an undisclosed IND-ready antibody it discovered with the OmniAb platform and its sub-licensee will be responsible for all future costs related to the program.
- Eli Lilly added a drug candidate to its Captisol® platform license and supply agreement, first entered into in December of 2011.

New Licensing Deals

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Ligand announced a license agreement for its LTP technology with Nucorion Pharmaceuticals, a venture-funded biotechnology company focused on developing anti-cancer and anti-viral agents initially directed to China, of which Ligand is a minority shareholder. Three initial programs fall under the license: NUC-202, a targeted anti-cancer analog for the treatment of hepatocellular carcinoma; NUC-404, a targeted nucleotide analog for the treatment of hepatitis B; and NUC-101, a targeted nucleotide analog for the treatment of hepatitis C. Ligand is eligible to receive milestones in addition to royalties ranging from 5% to 9% on future net sales of any approved program.

- Ligand announced a worldwide license agreement with Gilead Sciences that allows Gilead to use the OmniAb platform to discover fully human mono- and bispecific antibodies. Ligand is eligible to receive annual access payments, milestone payments and royalties on future net sales of any antibodies discovered under the license.

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- Ligand entered a worldwide license agreement with F-Star Biotechnology Limited that allows F-Star to use the OmniAb platform to discover fully human mono- and bispecific antibodies. Ligand is eligible to receive annual access payments, milestone payments and royalties on future net sales of any antibodies discovered under the license.

Internal Glucagon Receptor Antagonist (GRA) Program

- Ligand scientists gave an oral presentation on GRA at ENDO 2016 and presented a poster at the Levine-Riggs Diabetes Research Symposium, which highlighted data from the Phase 1b trial demonstrating that GRA significantly reduced fasting and post-prandial glucose in subjects with type 2 diabetes. Ligand expects to initiate a Phase 2 trial for the program in Q3 2016.

Recent Acquisitions

- In May 2016, Ligand acquired economic rights to multiple programs owned by CorMatrix. Ligand paid $17.5 million to receive a portion of revenue from CorMatrix's existing marketed products and will have the right to receive future royalties from potential future products.

Results of Operations

Three and six months ended June 30, 2016 and 2015
Total revenues for the three and six months ended June 30, 2016 were $19.5 million and $49.2 million, respectively, compared to $18.4 million and $33.0 million, respectively for the same periods in 2015. We reported a net loss of $5.8 million and net income of $0.8 million for the three and six months ended June 30, 2016, respectively, compared to net income of $23.6 million and $24.3 million, respectively, for the same periods in 2015.

Royalty Revenue
Royalty revenues were $9.8 million and $24.1 million for the three and six months ended June 30, 2016, respectively, compared to $6.6 million and $16.9 million, respectively, for the same periods in 2015. The increase in royalty revenue is primarily due to an increase in Promacta and Kyprolis royalties.

Material Sales
We recorded material sales of $3.9 million and $9.2 million, respectively, for the three and six months ended June 30, 2016 compared to $10.7 million and $14.4 million, respectively, for the same periods in 2015. The decrease in material sales of for the three and six months ended June 30, 2016 is due to timing of customer purchases of Captisol for use in clinical trials and in commercialized products.

License fees, milestones and other revenue
We recorded license fees, milestones and other revenue of $5.9 million and $15.8 million for the three and six months ended June 30, 2016, respectively, compared to $1.1 million and $1.7 million for the same periods in 2015, respectively. The increase for the three and six months ended June 30, 2016 is primarily due to timing of significant milestones and upfront fees earned and revenues from OmniAb partners.

Cost of Sales
Cost of sales were $0.7 million and $1.7 million for the three and six months ended June 30, 2016, respectively, compared to $2.6 million and $3.7 million for the same periods in 2015, respectively. The decrease is primarily due to lower material sales as a result of timing of customer purchases and lower overall cost of goods.

Amortization of intangibles

Amortization of intangible assets was $2.7 million and $5.2 million for the three and six months ended June 30, 2016, respectively, compared to $0.6 million and $1.2 million for the same periods in 2015, respectively. The increase is due to the acquisition of OMT and the related amortization of definite lived intangible assets.

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Research and Development Expenses

Research and development expenses were $4.5 million and $8.5 million for the three and six months ended June 30, 2016, respectively, compared to $3.4 million and $6.8 million for the same periods in 2015, respectively. The increase for the three and six months ended June 30, 2016 is primarily due to stock based compensation expense and timing of internal development costs.

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

General and Administrative Expenses

General and administrative expenses were $6.9 million and $13.7 million for the three and six months ended June 30, 2016, respectively, compared to $7.2 million and $13.2 million for the same periods in 2015, respectively. The increase for the six months ended June 30, 2016 is primarily due to an increase in stock-based compensation expense and an increase in headcount related expenses.

Lease Exit and Termination Costs

Lease exit and termination costs were $0.4 million and $0.6 million for the three and six months ended June 30, 2016, respectively, compared to $0.2 million and $0.4 million for the same periods in 2015, respectively.

Interest Expense, net

Interest expense, net was $3.1 million and $6.1 million for the three and six months ended June 30, 2016, respectively, compared to $3.0 million and $5.9 million for the same periods in 2015, respectively. The majority of interest expense and non-cash debt related costs are related to our 2019 Convertible Senior Notes.

Increase in Contingent Liabilities

We recorded an increase in contingent liabilities of $0.3 million and $1.6 million for the three and six months ended June 30, 2016, respectively, compared to an increase of $7.3 million and $7.3 million for the same periods in 2015, respectively. The increase for the three months ended June 30, 2016 primarily relates to an increase of $0.1 million in the liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition and is further impacted by an increase of $0.2 million in the liability for amounts potentially due to holders of CVRs related to our CyDex acquisition. The increase of $1.6 million for the six months ended June 30, 2016 is primarily due to an increase in amounts potentially due to holders of the CyDex CVRs of $0.4 million and an increase of $1.2 million in amounts potentially due to holders of CVRs associated with our Metabasis acquisition. 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.

Other Income, Net

We recorded a gain of $0.5 million representing the fair market value of the warrants received as a result of Viking's partial repayment of the Viking note receivable and the Company's purchase of Viking common stock and warrants in April 2016.

Income Tax Expense

We recorded an income tax benefit of $3.9 million and $0.2 million for the three and six months ended June 30, 2016, respectively compared to income tax expense of $0.3 million and $0.3 million for the same periods in 2015. The income tax benefit for the three and six months ended June 30, 2016 is based on the estimated annual effective tax rate of 40.6%. Income tax expense for the three and six months ended June 30, 2015 is primarily attributable to an increase in our deferred tax liability associated with the tax amortization of acquired indefinite lived IPR&D intangible assets.

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Discontinued Operations

Oncology Product Line

In 2006, we entered into a purchase agreement with Eisai pursuant to which Eisai agreed to acquire our Oncology product line which included four marketed oncology drugs: ONTAK, Targretin capsules, Targretin gel and Panretin gel. Certain liabilities were recorded associated with the disposal of the product line. During the six months ended June 30, 2016 we recognized a $1.1 million gain due to subsequent changes in certain estimates and liabilities previously recorded.

Income Taxes from Discontinued Operations

We recorded a provision for income taxes related to discontinued operations for the six months ended June 30, 2016 of $0.4 million related to the gain recognized.

Liquidity and Capital Resources

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

We had a net loss of $5.8 million for the quarter ended June 30, 2016. As of June 30, 2016, our cash, cash equivalents and marketable securities totaled $107.0 million, and we had a working capital deficit of $93.8 million. We believe that our currently available funds, cash generated from operations as well as existing sources of and access to financing will be sufficient to fund our anticipated operating, capital requirements and debt service requirement. We expect to build cash in future months as we continue to generate significant cash flow from royalty, license and milestone revenue and Captisol material sales primarily driven by continued increases in Promacta and Kyprolis sales, recent product approvals and regulatory developments, as well as revenue from anticipated new licenses and milestones. In addition, we anticipate that our liquidity needs can be met through other sources, including sales of marketable securities, borrowings through commercial paper and/or syndicated credit facilities and access to other domestic and foreign debt markets and equity markets.

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

Investments

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

Borrowings and Other Liabilities

2019 Convertible Senior Notes

We have convertible debt outstanding as of June 30, 2016 related to our 2019 Convertible Senior Notes. In August 2014, we issued $245.0 million aggregate principal amount of convertible senior unsecured notes. The Notes are convertible into common stock upon satisfaction of certain conditions. Interest of 0.75% per year is payable semi-annually on August 15th and February 15th through the maturity of the notes in August 2019.

Repurchases of Common Stock

In September 2015, our Board of Directors authorized us to repurchase up to $200.0 million of our common stock from time to time over a period of up to three years. There were no repurchases during the six-month period ended June 30, 2016.

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Contingent Liabilities

CyDex

In connection with the acquisition of CyDex in January 2011, we issued a series of CVRs and also assumed certain contingent liabilities. We may be required to make additional payments upon achievement of certain clinical and regulatory milestones to the CyDex shareholders and former license holders. In addition, we will pay CyDex shareholders, for each respective year through 2016, 20% of all CyDex-related revenue, but only to the extent that, and beginning only when, CyDex-related revenue for such year exceeds $15.0 million; plus an additional 10% of all CyDex-related revenue recognized during such year, but only to the extent that, and beginning only when aggregate CyDex-related revenue for such year exceeds $35.0 million. We have paid $23.6 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, 2016 was $7.0 million, and as of December 31, 2015 was $9.5 million.

Metabasis

In connection with the acquisition of Metabasis in January 2010, we entered into four CVR agreements with Metabasis shareholders. The CVRs entitle the holders to cash payments upon the sale or licensing of certain assets and upon the achievement of specified milestones. The fair value of the liability at June 30, 2016 was $2.5 million, and as of December 31, 2015 was $4.0 million.

Leases and Off-Balance Sheet Arrangements

We lease our office and research facilities under operating lease arrangements with varying terms through November 2019. The agreements provide for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases ranging from 3.0% to 3.5%. We also sublease a portion of our facilities through leases which expire between 2015 and 2023. The sublease agreements provide for a 3% increase in annual rents. We had no off-balance sheet arrangements at June 30, 2016 and December 31, 2015.

Cash Flows

Operating Activities

Net cash provided by operating activities in the first half of 2016 was $23.5 million compared to $17.6 million for the first half of 2015.

The net cash provided for the first half of 2016 reflects net income of $0.8 million, adjusted by $33.2 million of non-cash items to reconcile net income to net cash generated from operations. These reconciling items primarily reflect stock-based compensation of $8.4 million, amortization of debt discount and issuance fees of $5.4 million, depreciation and amortization of $5.4 million, loss from Viking Therapeutics of $12.7 million, realized gain on investments of $0.6 million, $1.6 million increase in the estimated fair value of contingent liabilities, fair value adjustment for Viking note receivable and warrants of $0.3 million and deferred income taxes of $0.2 million. The cash generated during the six months ended June 30, 2016 is further impacted by changes in operating assets and liabilities due primarily to an increase in accounts receivable of $3.8 million, a decrease in accounts payable and accrued liabilities of $3.3 million and an increase in inventory of $2.2 million. Partially offsetting, cash generated for the period was impacted by a decrease in other current assets of $0.6 million.

The net cash provided for the first half of 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 from VikingTherapeutics 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.

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Investing Activities

Net cash used in investing activities in the first half of 2016 was $61.5 million compared to $75.0 million for the first half of 2015.

The net cash used for the first half of 2016 primarily reflects cash paid to acquire OMT (net of cash acquired) of $92.5 million, the purchase of short-term investments of $49.9 million, purchase of commercial license rights of $17.7 million, payments to CVR holders and other contingency payments of $5.6 million, purchase of Viking common stock and warrants of $0.7 million and purchase of property and equipment, primarily related to our new office headquarters of $1.0 million, partially offset by proceeds from sales and maturity of short-term investments of $22.1 million and $83.5 million respectively.

The net cash used for the first half of 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.

Financing Activities

Net cash provided by financing activities in the first half of 2016 was $2.0 million compared to $5.4 million for the first half of 2015.

The net cash provided for the first half of 2016 reflects $2.5 million of proceeds received from stock option exercises and our employee stock purchase plan, partially offset by $0.5 million purchase of common stock for net settlement of RSUs vested and released during the quarter.

The net cash provided for the first half of 2015 reflects $5.4 million of proceeds received from stock option exercises and our employee stock purchase plan.

Critical Accounting Policies

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

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

Investment Portfolio Risk
At June 30, 2016, our investment portfolio included investments in available-for-sale equity securities of $45.6 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

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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.

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ITEM 4. CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon and as of the date of that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in reports we file or submit pursuant to the Exchange Act is (1) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (2) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

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

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.

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PART II. OTHER INFORMATION

ITEM 1. Legal Proceedings

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

Securities Litigation

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

Paragraph IV Certification by Par Pharmaceuticals

On January 7, 2016, we received a paragraph IV certification from Par Sterile Products, LLC, a subsidiary of Par Pharmaceuticals, Inc., or Par, advising us that it had filed an ANDA with the FDA seeking approval to market a generic version of Merck's NOXAFIL-IV product. The paragraph IV certification states it is Par's position that Merck's U.S. Patent No. 9,023,790 related to NOXAFIL-IV and our U.S. Patent No. 8,410,077 related to Captisol are invalid and/or will not be infringed by Par's manufacture, use or sale of the product for which the ANDA was submitted. On February 19, 2016, Merck filed an action against Par in the United States District Court for the District of New Jersey, asserting that Par's manufacture, use or sale of the product for which the ANDA was submitted would infringe Merck's U.S. Patent No. 9,023,790. Subsequently, U.S. Patent No. 9,358,297 issued to Merck, Merck listed this patent in the Orange Book, Par amended its ANDA to include a certification that this patent was invalid, unenforceable and/or will not be infringed by Par's ANDA product, and Par sent a supplemental Notice Letter to Merck. On July 29, 2016, Merck filed an Amended Complaint adding an assertion that Par's ANDA filing infringed U.S. Patent No. 9,358,297. The case against Par is captioned Merck Sharpe & Dohme Corp. v. Par Sterile Products, LLC, Par Pharmaceuticals, Inc., Par Pharmaceutical Companies, Inc., and Par Pharmaceutical Holdings, Inc., No.16-cv-00948-PGS-DEA.

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ITEM 1A. RISK FACTORS

The following is a summary description of some of the many risks we face in our business. You should carefully review these risks in evaluating our business, including the businesses of our subsidiaries. You should also consider the other information described in this report. The risk factors set forth below with an asterisk (*) next to the title are new risk factors or risk factors containing material changes from the risk factors previously disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the SEC on February 26, 2016:

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

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

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

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

If products or product candidates incorporating Captisol technology were to cause any unexpected adverse events, the perception of Captisol safety could be seriously harmed. If this were to occur, we may not be able to market Captisol products unless and until we are able to demonstrate that the adverse event was unrelated to Captisol, which we may not be able to do. Further, whether or not the adverse event was a result of Captisol, we could be required by the FDA to submit to additional regulatory reviews or approvals, including extensive safety testing or clinical testing of products using Captisol, which would be expensive and, even if we were to demonstrate that the adverse event was unrelated to Captisol, would delay the marketing of Captisol-enabled products and receipt of revenue related to those products, which could significantly impair our operating results and/or reduce the market price of our stock.

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

We currently depend on our arrangements with our outlicensees to sell products using our Captisol technology. These agreements generally provide that outlicensees may terminate the agreements at will. If our outlicensees discontinue

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

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Further, under most of our Captisol outlicenses, the amount of royalties we receive will be reduced or will cease when the relevant patent expires. Our high purity patents and foreign equivalents, are not expected to expire until 2029 and our morphology patents and foreign equivalents, are not expected to expire until 2025, but the initially filed patents relating to Captisol expired starting in 2010 in the United States and will expire by 2016 in most countries outside the United States. If our other intellectual property rights are not sufficient to prevent a generic form of Captisol from coming to market and if in such case our outlicensees choose to terminate their agreements with us, our Captisol revenue may decrease significantly.

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

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

Generally, our success will depend on our ability and the ability of us and our partners to obtain and maintain patents and other intellectual property rights for our and their potential products both in the United States and in foreign countries. Our patent position, like that of many biotechnology and pharmaceutical companies, is uncertain and involves complex legal and technical questions for which important legal principles are unresolved. Even if we or our partners do obtain patents, such patents may not adequately protect the technology we own or have licensed. For example, in January 2016, we received a paragraph IV certification from a subsidiary of Par advising us that it had filed an ANDA with the FDA seeking approval to market a generic version of Merck's NOXAFIL-IV product. The paragraph IV certification alleges that Merck's U.S. Patent No. 9,023,790 related to NOXAFIL-IV and our U.S. Patent No. 8,410,077 related to Captisol, which we refer to as the '077 Patent, are invalid and/or will not be infringed by Par's manufacture, use or sale of the product for which the ANDA was submitted. If Par succeeds in receiving the ANDA, we could lose the revenues related to NOXAFIL-IV or the ability to enter into new licenses using our '077 Patent. For additional information, see "Item 1. Legal Proceedings."

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

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

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

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

Our existing collaborations may not continue or be successful, and we may be unable to enter into future collaborative arrangements to develop and commercialize our unpartnered assets. Generally, our current collaborative partners also have the right to terminate their collaborations at will or under specified circumstances. If any of our collaborative partners breach or terminate their agreements with us or otherwise fail to conduct their collaborative activities successfully (for example, by not making required payments when due, or at all), our product development under these agreements will be delayed or terminated.

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Disputes or litigation may also arise with our collaborators (with us and/or with one or more third parties), including those over ownership rights to intellectual property, know-how or technologies developed with our collaborators. Such disputes or litigation could adversely affect our rights to one or more of our product candidates and could delay, interrupt or terminate the collaborative research, development and commercialization of certain potential products, create uncertainty as to ownership rights of intellectual property, or could result in litigation or arbitration. The occurrence of any of these problems could be time-consuming and expensive and could adversely affect our business.

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

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

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

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

Our OmniAb antibody platform faces specific risks, including the fact that no drug using antibodies from the platform has been tested in clinical trials.

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

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

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

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

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

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

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

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

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

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

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

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

Our shareholder rights plan and provisions contained in our certificate of incorporation and bylaws may discourage transactions involving an actual or potential change in our ownership. In addition, our Board of Directors may issue shares of common or preferred stock without any further action by the stockholders. Our directors and certain of our institutional investors, collectively beneficially own a significant portion of our outstanding common stock. We have in the past granted waivers to investors allowing them to increase their ownership level above the limit set forth in our shareholder rights agreement. Such restrictions, circumstances and issuances may have the effect of delaying or preventing a change in our ownership. If changes in our ownership are discouraged, delayed or prevented, it would be more difficult for our current Board of Directors to be removed and replaced, even if you or our other stockholders believe that such actions are in the best interests of us and our stockholders.

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

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

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

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

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

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

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

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

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

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

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

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

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

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ITEM 6. EXHIBITS

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

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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 4, 2016 By: /s/ Matthew Korenberg
Matthew Korenberg
Vice President, Finance and Chief Financial Officer
Duly Authorized Officer and Principal Financial Officer

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EXHIBIT INDEX

Exhibit Number	Description
10.1†	Interest Purchase Agreement, dated May 3, 2016, by and between Ligand Pharmaceuticals Incorporated and CorMatrix Cardiovascular, Inc. (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K/A filed on May 9, 2016).
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.