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

FORM 10-Q

Mark One

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

For the quarterly period ended March 31, 2012

or

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

For the Transition Period From _____ to _____ .

Commission File Number: 001-33093

LIGAND PHARMACEUTICALS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**77-0160744**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
11085 North Torrey Pines Road La Jolla, CA	**92037**
(Address of principal executive offices)	**(Zip Code)**

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

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

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

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

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

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

As of April 30, 2012, the registrant had 19,734,419 shares of common stock outstanding.

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LIGAND PHARMACEUTICALS INCORPORATED
QUARTERLY REPORT

FORM 10-Q

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* No information provided due to inapplicability of item.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

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

	March 31 2012 (Unaudited)	December 31, 2011
ASSETS		
Current assets:		
Cash and cash equivalents	$ 9,777	$ 7,041
Short-term investments	1,517	10,000
Accounts receivable	1,992	6,110
Inventory	1,345	1,301
Deferred income taxes	237	237
Other current assets	2,778	1,344
Current portion of co-promote termination payments receivable	5,898	6,197
Total current assets	23,544	32,230
Restricted cash and investments	1,341	1,341
Property and equipment, net	375	455
Intangible assets, net	56,855	57,437
Goodwill	14,894	14,894
Long-term portion of co-promote termination payments receivable	14,226	15,255
Other assets	563	738
Total assets	$ 111,798	$ 122,350
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 7,893	$ 11,065
Accrued liabilities	4,143	5,054
Current portion of liability for contingent value rights	2,449	6,879
Bank line of credit	1,500	10,000
Current portion of note payable	1,436	—
Current portion of co-promote termination liability	5,898	6,197
Current portion of lease exit obligations	3,160	3,208
Current portion of deferred revenue	727	1,240
Total current liabilities	27,206	43,643
Long-term portion of note payable	26,435	20,286
Long-term portion of co-promote termination liability	14,226	15,255
Long-term portion of deferred revenue, net	3,370	3,466
Long-term portion of lease exit obligations	7,716	8,367
Deferred income taxes	2,664	2,522
Long-term portion of liability for contingent value rights	10,550	11,433
Other long-term liabilities	388	388
Total liabilities	92,555	105,360
Commitments and contingencies		
Common stock subject to conditional redemption; 0 and 112,371 shares issued and outstanding at March 31, 2012 and December 31, 2011, respectively	—	8,344
Stockholders' equity (deficit):		
Common stock, $0.001 par value; 33,333,333 shares authorized; 20,852,523 and 20,682,506 shares issued at March 31, 2012 and December 31, 2011, respectively	21	21
Additional paid-in capital	741,889	732,676
Accumulated other comprehensive income	—	—
Accumulated deficit	(680,387)	(681,771)
Treasury stock, at cost; 1,118,222 shares at March 31, 2012 and December 31, 2011	(42,280)	(42,280)
Total stockholders' equity (deficit)	19,243	8,646
Total liabilities and stockholders' equity (deficit)	$ 111,798	$ 122,350

See accompanying notes.

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

	Three Months Ended March 31,	
	2012	2011
Revenues:		
Royalties	$ 3,060	$ 1,993
Material sales	667	1,019
Collaborative research and development and other revenues	1,909	884
Total revenues	5,636	3,896
Operating costs and expenses:		
Cost of sales	155	525
Research and development	2,817	1,986
General and administrative	3,503	3,445
Lease exit and termination costs	(74)	(151)
Total operating costs and expenses	6,401	5,805
Accretion of deferred gain on sale leaseback	—	426
Loss from operations	(765)	(1,483)
Other income (expense):		
Interest income	17	37
Interest expense	(792)	(423)
Decrease (increase) in liability for contingent value rights	764	(1,736)
Other, net	254	48
Total other income (expense), net	243	(2,074)
Loss before income taxes	(522)	(3,557)
Income tax benefit (expense)	35	13,585
Income (loss) from continuing operations	(487)	10,028
Discontinued operations:		
Gain on sale of AVINZA Product Line before income taxes	2,048	—
Gain on sale of Oncology Product Line before income taxes	—	4
Income tax benefit (expense) on discontinued operations	(177)	—
Discontinued operations	1,871	4
Net income:	$ 1,384	$ 10,032
Basic and diluted per share amounts:		
Income (Loss) from continuing operations	($ 0.03)	$ 0.51
Discontinued operations	0.10	0
Net income	$ 0.07	$ 0.51
Weighted average number of common shares-basic and diluted	19,709,078	19,623,249

See accompanying notes.

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

	Three Months Ended March 31,	
	2012	2011
Net income	$1,384	$10,032
Unrealized net (loss) on available-for-sale securities	—	(26)
Comprehensive income	$1,384	$10,006

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

	Three Months Ended March 31,	
	2012	2011
Operating activities		
Net income (loss)	$ 1,384	$ 10,032
Less: gain from discontinued operations	1,871	4
Income (loss) from continuing operations	(487)	10,028
Adjustments to reconcile net income (loss) to net cash used in operating activities, including effects of business acquired:		
Non-cash change in estimated fair value of contingent value rights	(764)	1,736
Accretion of deferred gain on sale leaseback	—	(426)
Depreciation and amortization	678	564
Non-cash lease costs	—	(90)
Loss (gain) on asset write-offs	(10)	—
Realized loss (gain) on investment	(17)	(23)
Stock-based compensation	709	452
Deferred income taxes	(35)	(13,908)
Other	85	29
Changes in operating assets and liabilities, net of acquisition:		
Accounts receivable	4,118	1,024
Inventory	(44)	(1,797)
Other current assets	(462)	4,605
Other long term assets	175	460
Accounts payable and accrued liabilities	(3,506)	(970)
Other liabilities	—	(800)
Deferred revenue	(609)	27
Net cash provided by (used in) operating activities of continuing operations	(169)	911
Net cash (used in) operating activities of discontinued operations	(200)	—
Net cash provided by (used in) operating activities	(369)	911
Investing activities		
Acquisition of CyDex, net of cash acquired	—	(32,024)
Payments to CVR holders	(4,549)	—
Purchases of property, equipment and building	(19)	(5)
Proceeds from sale of property, and equipment and building	13	—
Purchases of short-term investments	—	(5,000)
Proceeds from sale of short-term investments	8,500	13,888
Other, net	—	(28)
Net cash provide by (used in) investing activities of continuing operations	3,945	(23,169)
Net cash provided by investing activities of discontinued operations	—	—
Net cash provided by (used in) investing activities	3,945	(23,169)
Financing activities		
Proceeds from issuance of debt	7,500	25,000
Repayment of debt	(8,500)	—
Proceeds from issuance of common stock, net	160	—
Share repurchases	—	(55)
Net cash provided by (used in) financing activities of continuing operations	(840)	24,945
Net cash provided by (used in) financing activities	(840)	24,945
Net increase in cash and cash equivalents	2,736	2,687
Cash and cash equivalents at beginning of period	7,041	3,346
Cash and cash equivalents at end of period	$ 9,777	$ 6,033
Supplemental Disclosure of cash flow information		
Interest paid	$ 631	$ 321
Taxes paid	17	27

See accompanying notes.

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

1. Basis of Presentation

Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company" or "Ligand"), is a biotechnology company that focuses on drug discovery and early-stage development of pharmaceuticals that address critical unmet medical needs or that are more effective and/or safer than existing therapies, more convenient to administer and are cost effective. The Company's principal market is the United States. The Company sold its Oncology Product Line ("Oncology") and AVINZA Product Line ("AVINZA") on October 25, 2006 and February 26, 2007, respectively. The operating results for Oncology and AVINZA have been presented in the accompanying consolidated financial statements as "Discontinued Operations".

The Company has incurred significant losses since its inception. At March 31, 2012, the Company's accumulated deficit was $680.4 million and the Company had negative working capital of $3.7 million. Based on management's plans, including expense reductions, if necessary, the Company believes its currently available cash, cash equivalents, and short-term investments as well as its current and future royalty, license and milestone revenues will be sufficient to satisfy its anticipated operating and capital requirements through at least the next twelve months. The Company's future operating and capital requirements will depend on many factors, including, but not limited to: the pace of scientific progress in its research and development programs; the potential success of these programs; the scope and results of preclinical testing and clinical trials; the time and costs involved in obtaining regulatory approvals; the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims; competing technological and market developments; the amount of royalties on sales of the commercial products of its partners; the efforts of its collaborative partners; obligations under its operating lease agreements; and the capital requirements of any companies the Company previously acquired, including Pharmacopeia, Inc. ("Pharmacopeia"), Neurogen Corporation ("Neurogen"), Metabasis Therapeutics, Inc. ("Metabasis") and CyDex Pharmaceuticals, Inc. ("CyDex"). Management's plans and efforts may not fully address any significant adverse impact from any or all of these factors and the Company may be required to obtain additional financing, which may not be available at acceptable terms, or at all.

Principles of Consolidation

The condensed consolidated financial statements include the Company's wholly owned subsidiaries, Seragen, Inc. ("Seragen"), Nexus Equity VI LLC ("Nexus"), Pharmacopeia, Neurogen, Metabasis and CyDex. All significant intercompany accounts and transactions have been eliminated in consolidation.

Basis of Presentation

Our accompanying unaudited consolidated condensed financial statements as of March 31, 2012 and for the three months ended March 31, 2012 and 2011 have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for annual financial statements. Our consolidated condensed balance sheet at December 31, 2011 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation of the financial position and results of operations of Ligand Pharmaceuticals Incorporated, and our subsidiaries have been included. Operating results for the three months ended March 31, 2012 are not necessarily indicative of the results that may be expected for the year ending December 31, 2012. These financial statements should be read in conjunction with the consolidated financial statements and notes therein included in our annual report on Form 10-K for the year ended December 31, 2011.

Use of Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, including disclosure of contingent assets and liabilities, at the date of the consolidated financial statements, and the reported amounts of revenue and expenses during the reporting period. The Company's critical accounting policies are those that are both most important to the Company's financial condition and results of operations and require the most difficult, subjective or complex judgments on the part of management in their application, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Because of the uncertainty of factors surrounding the estimates or judgments used in the preparation of the consolidated financial statements, actual results may materially vary from these estimates.

Income (Loss) Per Share

Basic earnings per share is calculated by dividing net income or loss by the weighted average number of common shares and vested restricted stock units outstanding. Diluted earnings per share is computed by dividing net income or loss by the weighted average number of common shares and vested restricted stock units outstanding and the weighted average number of dilutive common stock equivalents, including stock options and non-vested restricted stock units. Common stock equivalents are only included in the diluted earnings per share calculation when their effect is dilutive. For the three months ended March 31, 2012 and 2011, no potential common shares are included in the computation of any diluted per share amounts, including income (loss) per share from discontinued operations and net loss per share, as the Company reported a loss from continuing operations. Potential common shares, the shares that would be issued upon the exercise of outstanding stock options and warrants and the vesting of restricted shares that would be excluded from the computation of diluted loss per share, were 2.3 million and 1.3 million at March 31, 2012 and 2011, respectively.

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

	Three Months Ended March 31,	
	2012	2011
Net income (loss) from continuing operations	$ (487)	$ 10,028
Net income from discontinued operations	1,871	4
Net income	1,384	10,032
Shares used to compute basic and diluted income per share	19,709,078	19,623,249
Basic and diluted per share amounts:		
Income (loss) from continuing operations	$ (0.03)	$ 0.51
Income from discontinued operations	0.10	—
Net income	$ 0.07	$ 0.51

Revenue Recognition

Royalties on sales of products commercialized by the Company's partners are recognized in the quarter reported by the respective partner.

Material sales revenue is recognized upon transfer of title, which normally passes to the buyer upon shipment to the customer. The Company's credit and exchange policy includes provisions for the return of product between 30 to 90 days, depending on the specific terms of the individual agreement, when that product (1) does not meet specifications, (2) is damaged in shipment (in limited circumstances where title does not transfer until delivery), or (3) is exchanged for an alternative grade of CAPTISOL.

Revenue from research funding under the Company's 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.

Nonrefundable, up-front license fees and milestone payments with standalone value that are not dependent on any future performance by the Company under the Company's collaboration agreements are recognized as revenue upon the earlier of when payments are received or collection is assured, but are deferred if the Company has continuing performance obligations. If the Company is unable to determine the stand alone value under multiple-element arrangements, revenue is recognized over the period of services or performance. Amounts received under multiple-element arrangements requiring ongoing services or performance by the Company are recognized over the period of such services or performance.

Revenue from milestones are recognized when earned, as evidenced by written acknowledgement from the collaborator, provided that (i) 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 (ii) 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.

Income Taxes

The Company recognizes liabilities or assets for the deferred tax consequences of temporary differences between the tax bases of assets or liabilities and their reported amounts in the financial statements. These temporary differences will result in taxable or deductible amounts in future years when the reported amounts of the assets or liabilities are recovered or settled. A valuation allowance is established when management determines that it is more likely than not that all or a portion of a deferred tax asset will not be realized. Management evaluates the realizability of its net deferred tax assets on a quarterly basis and valuation allowances are provided, as necessary. During this evaluation, management reviews its forecasts of income in conjunction with other positive and negative evidence surrounding the realizability of its deferred tax assets to determine if a valuation allowance is required. Adjustments to the valuation allowance will increase or decrease the Company's income tax provision or benefit. Management also applies the relevant guidance to determine the amount of income tax expense or benefit to be allocated among continuing operations, discontinued operations, and items charged or credited directly to stockholders' equity. The Company recorded an income tax benefit of $ 35,000 and $13.6 million for the three months ended March 31, 2012 and 2011, respectively. The income tax benefit for the three months ended March 31, 2012 relates to losses from continuing operations which may be used to offset income from discontinued operations. Additionally, the Company recorded income tax expense from discontinued operations of $0.2 million. The income tax benefit for the three months ended March 31, 2011 relates to the Company's acquisition of CyDex in January 2011. For financial statement purposes, the Company recorded the acquired Cydex intangible assets of approximately $64.8 million. For tax purposes, the Company is required to carry over the historic tax basis of the assets and liabilities of Cydex. In accordance with ASC Topic 805, the Company established net deferred tax assets and liabilities of approximately $15 million. As a result of the ability to recognize deferred tax assets for these deferred tax liabilities, the Company released valuation allowances against its deferred tax assets resulting in an income tax benefit of $13.6 million for the three months ended March 31, 2011.

A tax position must meet a minimum probability threshold before a financial statement benefit is recognized. The minimum threshold is a tax position that is more likely than not to be sustained upon examination by the applicable taxing authority, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense.

Accounting for Stock-Based Compensation

Stock-based compensation expense for awards to employees and non-employee directors is recognized on a straight-line basis over the vesting period until the last tranche vests. Compensation cost for consultant awards is recognized over each separate tranche's vesting period. The Company recognized compensation expense of $0.7 million and $0.5 million for the three months ended March 31, 2012 and 2011, respectively. The compensation expense related to share-based compensation arrangements is recorded as components of research and development expenses ($0.2 million and $0.1 million) and general and administrative expenses ($0.5 million and $0.4 million) for the three months ended March 31, 2012 and 2011, respectively.

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

	Three Months Ended March 31,	
	2012	2011
Risk-free interest rate	1.1%	2.6%
Dividend yield	—	—
Expected volatility	68%	70%
Expected term	6.0 years	6.0 years

The expected term of the employee and non-employee director options is the estimated weighted-average period until exercise or cancellation of vested options (forfeited unvested options are not considered) based on historical experience. The expected term for consultant awards is the remaining period to contractual expiration.

Volatility is a measure of the expected amount of variability in the stock price over the expected life of an option expressed as a standard deviation. In selecting this assumption, management used the historical volatility of the Company's stock price over a period approximating the expected term.

Cash, Cash Equivalents and Short-term Investments

Cash and cash equivalents consist of cash and highly liquid securities with maturities at the date of acquisition of three months or less. Non-restricted equity and debt securities with a maturity of more than three months are considered short term investments. Restricted cash and investments consist of certificates of deposit held with financial institutions as collateral under a facility lease and third-party service provider arrangement. The following table summarizes the various investment categories at March 31, 2012 and December 31, 2011 (in thousands):

	Cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
March 31, 2012				
Certificates of deposit	$ 1,500	$ —	$ —	$ 1,500
Certificates of deposit—restricted	1,341	—	—	1,341
	$ 2,841	$ —	$ —	$ 2,841
December 31, 2011				
Certificates of deposit	10,000	—	—	10,000
Certificates of deposit—restricted	1,341	—	—	1,341
	$11,341	$ —	$ —	$11,341

Concentrations of Credit Risk

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

The Company invests its excess cash principally in United States government debt securities, investment grade corporate debt securities and certificates of deposit. The Company has established guidelines relative to diversification and maturities that maintain safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. Except as described above, the Company has not experienced any significant losses on its cash equivalents, short-term investments or restricted investments.

As of March 31, 2012 and December 31, 2011, cash deposits held at financial institutions in excess of FDIC insured amounts of $250,000 were approximately $10.5 million and $13.1 million, respectively.

Accounts receivable from one customer was 58% and 67% of total accounts receivable at March 31, 2012 and December 31, 2011.

The Company obtains CAPTISOL from a sole-source supplier. If this supplier were not able to supply the requested amounts of CAPTISOL, the Company would be unable to continue to derive revenues from the sale of CAPTISOL until it obtained an alternative source, which might take a considerable length of time.

Allowance for Doubtful Accounts

The Company maintains an allowance for doubtful accounts based on the best estimate of the amount of probable losses in the Company's existing accounts receivable. Accounts receivable that are outstanding longer than their contractual payment terms, ranging from 30 to 90 days, are considered past due. When determining the allowance for doubtful accounts, several factors are taken into consideration, including historical write-off experience and review of specific customer accounts for collectibility. Account balances are charged off against the allowance after collection efforts have been exhausted and the potential for recovery is considered remote. There was no allowance for doubtful accounts included in the balance sheets at March 31, 2012 and December 31, 2011.

Inventory

Inventory is stated at the lower of cost or market. The Company determines cost using the first-in, first-out method. The Company analyzes its inventory levels periodically and writes down inventory to its net realizable value if it has become obsolete, has a cost basis in excess of its expected net realizable value or is in excess of expected requirements.

Other Current Assets

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

	March 31, 2012	December 31, 2011
Prepaid expenses	$ 769	$ 905
Advanced manufacturing payments	291	312
Other receivables	1,718	127
	$ 2,778	$ 1,344

Property and Equipment

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

	March 31, 2012	December 31, 2011
Lab and office equipment	$ 4,119	$ 4,110
Leasehold improvements	57	62
Computer equipment and software	1,058	1,054
	5,234	5,226
Less accumulated depreciation and amortization	(4,859)	(4,771)
	$ 375	$ 455

Depreciation of equipment is computed using the straight-line method over the estimated useful lives of the assets, which range from three to ten years. Leasehold improvements are amortized using the straight-line method over their estimated useful lives or their related lease term, whichever is shorter.

Goodwill and Other Identifiable Intangible Assets

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

	March 31, 2012	December 31, 2011
Acquired in-process research and development	$13,036	$ 13,036
Complete technology	14,643	14,643
Trade name	2,537	2,537
Customer relationships	29,400	29,400
Goodwill	14,894	14,894
	74,510	74,510
Accumulated amortization	(2,761)	(2,179)
	$71,749	$ 72,331

On January 24, 2011, the Company completed its acquisition of CyDex Pharmaceuticals, Inc. As a result of the transaction, the Company recorded $46.6 million of intangible assets with definite lives. The weighted-average amortization period for the identified intangible assets with definite lives is 20 years. In addition, the Company recorded $3.2 million of acquired In-Process Research and Development (IPR&D) and $15.0 million of goodwill.

Intangible assets related to IPR&D are considered to be indefinite-lived until the completion or abandonment of the associated research and development efforts. During the period the assets are considered to be indefinite-lived, they will not be amortized but will be tested for impairment on an annual basis and between annual tests if the Company becomes aware of any events occurring or changes in circumstances that would indicate a reduction in the fair value of the IPR&D projects below their respective carrying amounts. If and when development is complete, which generally occurs if and when regulatory approval to market a product is obtained, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time. Amortization expense of $0.6 million and $0.4 million was recognized for the three months ended March 31, 2012 and 2011, respectively. Estimated amortization expense for the years ending December 31, 2012 through 2016 is $2.3 million per year.

Impairment of Long-Lived Assets

Management reviews long-lived assets for impairment annually or whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. Fair value for the Company's long-lived assets is determined using the expected cash flows discounted at a rate commensurate with the risk involved. As of March 31, 2012, management does not believe there have been any events or circumstances indicating that the carrying amount of its long-lived assets may not be recoverable.

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	March 31, 2012	December 31, 2011
Compensation	$ 604	$ 1,806
Legal	439	355
Other	3,100	2,893
	$ 4,143	$ 5,054

Other Long-Term Liabilities

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

	March 31, 2012	December 31, 2011
Deposits	388	388
	$ 388	$ 388

Sale of Royalty Rights

The Company previously sold to third parties the rights to future royalties of certain of its products. As part of the underlying royalty agreements, the partners have the right to offset a portion of any future royalty payments owed to the Company to the extent of previous milestone payments. Accordingly, the Company deferred a portion of the revenue associated with each tranche of royalty right sold, equal to the pro-rata share of the potential royalty offset. Such amounts associated with the offset rights against future royalty payments will be recognized as revenue upon receipt of future royalties from the respective partners. As of March 31, 2012 and December 31, 2011, the Company had deferred $1.2 million of revenue related to the sale of royalty rights, which is included in long-term portion of deferred revenue.

Recently Adopted Accounting Pronouncements

In June 2011, the FASB issued ASU No. 2011-05, *Comprehensive Income (Topic 220)—Presentation of Comprehensive Income*. This ASU amends Topic 220, *Comprehensive Income*, to allow an entity the option to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In both choices, an entity is required to present each component of net income along with total net income, each component of other comprehensive income along with a total for other comprehensive income, and a total amount for comprehensive income. ASU No. 2011-05 eliminates the option to present the components of other comprehensive income as part of the statement of changes in shareholders' investment. The amendments to the Codification in the ASU do not change the items that must be reported in other comprehensive income or when an item of other comprehensive income must be reclassified to net income. The ASU was effective for fiscal years beginning after December 15, 2011 for the Company. In 2012, the Company has adopted to present comprehensive income in a separate statement.

In December 2011, the FASB issued ASU 2011-12, *Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income* in ASU 2011-12. The amendments in ASU 2011-12 defer the changes in ASU 2011-05 that relate to the presentation of reclassification adjustments out of accumulated other comprehensive income. The amendments in this ASU are effective for public entities for fiscal years, and interim periods within those years, beginning after December 15, 2011. See above for the provisions of ASU 2011-05.

2. Acquisition of CyDex

On January 24, 2011, the Company acquired CyDex Pharmaceuticals, Inc., a specialty pharmaceutical company developing products and licensing its CAPTISOL® technology. CAPTISOL is currently incorporated in five FDA-approved medications and marketed by three of CyDex's licensees: Pfizer, Bristol-Myers Squibb and Baxter International. In addition, CyDex is supporting drug development efforts with more than 40 companies worldwide.

Under the terms of the agreement, the Company paid $32.0 million to the CyDex shareholders and issued a series of Contingent Value Rights. The Company paid $4.3 million in January 2012 and may be required to pay up to an additional $9.5 million upon achievement of certain milestones. In addition, the Company will pay CyDex shareholders, for each respective year from 2011 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. The Company paid $0.3 million to the CyDex shareholders in March 2012 for 20% of all 2011 CyDex-related revenue in excess of $15 million.

The CyDex Contingent Value Rights Agreement ("CVR") requires the Company to, in the event of a default, deliver to an escrow agent the future cash payments described above, and such amounts would then be delivered by the escrow agent to the CyDex shareholders if, as and when they would have by the CyDex CVR Agreement been required to be delivered to the CyDex shareholders by the Company. "Default" includes the following, subject to certain cure rights: (a) the Company fails to pay to the Shareholders' Account any amount as and when required under the CyDex CVR Agreement, (b) at any time the Company is obligated for more than $35.0 million of financial indebtedness (other than financial indebtedness which is expressly subordinated to all obligations of Ligand under the CyDex CVR Agreement pursuant to a written subordination agreement signed by and reasonably acceptable to the Shareholders' Representative), (c) at any time after March 15, 2011 the Company's cash, cash equivalents and short-term investments is less than $10.0 million, or (d) the Company commits any material breach of the CyDex CVR Agreement.

Ligand is required by the CyDex CVR Agreement to dedicate at least five experienced full-time employee equivalents per year to the acquired business and to invest at least $1.5 million per year, inclusive of such employee expenses, in the acquired business, through 2015. As of March 31, 2012, the Company estimates it has spent approximately $1.2 million for its commitment for the year ending December 31, 2012.

At the closing of the acquisition, the Company recorded a $19.2 million contingent liability for amounts potentially due to holders of the CyDex CVRs. The initial fair value of the liability was determined using a discounted cash flow analysis incorporating the estimated future cash flows from potential milestones and revenue sharing. These cash flows were then discounted to present value using a discount rate of 21.6%. The liability will be periodically assessed based on events and circumstances related to the underlying milestones, and the change in fair value will be recorded in the Company's consolidated statements of operations. The carrying amount of the liability may fluctuate significantly and actual amounts paid under the CVR agreements may be materially different than the carrying amount of the liability. The fair value of the liability at March 31, 2012 was $12.3 million.

The components of the purchase price allocation for CyDex are as follows (in thousands):

Purchase Consideration:	
Cash paid to CyDex shareholders	$ 31,572
Estimated fair value of contingent consideration	14,905
Cash payable to CyDex shareholders	4,300
Total purchase consideration	$ 50,777
Allocation of Purchase Price:	
Cash	$ 85
Accounts receivable	1,202
Inventory	2,414
In-process research and development	3,200
Intangible assets with definite lives	46,580
Goodwill	14,194
Other assets	1,311
Liabilities assumed	(18,209)
	$ 50,777

The acquired identified intangible assets with definite lives from the acquisition with CyDex are as follows:

Acquired Intangible Assets (in thousands)	
Complete technology	$14,643
Trademark and trade name	2,537
Customer relationships	29,400
	$46,580

The weighted-average amortization period for the identified intangible assets with definite lives is 20 years.

The Company has allocated $3.2 million of the purchase price of CyDex to acquired In-Process Research and Development (IPR&D). This amount represents the estimated fair value of CyDex's two main proprietary products that have not yet reached technological feasibility and do not have future alternative use as of the date of the merger. The valuation was based on a probability-weighted present value of the expected upfront and milestone payments based on a recently signed letter of intent and term sheet. The probability of success takes into account the stages of completion and the risks surrounding successful development and commercialization of the underlying product candidates. These cash flows were then discounted to present value using a discount rate of 21.5%.

The Company has allocated $46.6 million to identified intangible assets with definite lives as follows: complete technology $14.6 million, trademark and trade name $2.5 million and customer relationships $29.4 million. The valuation of the complete technology, or CyDex's CAPTISOL technology, was based on a derivative of the discounted cash flow method that estimated the present value of a hypothetical royalty stream derived via the licensing of similar technology. These projected cash flows were then discounted to present value using a discount rate of 20.5%. The valuation of the trademark and trade name was based on the Relief from Royalty method using royalty rates paid in third-party licensing agreements involving similar trade names. These projected cash flows were then discounted to present value using a discount rate of 20.5%. The valuation of the customer relationships was based on a discounted cash flow analysis incorporating the estimated future cash flows from these relationships during their assumed life of 20 years. These cash flows were then discounted to present value using a discount rate of 21.5%.

Had the merger with CyDex been completed as of the beginning of 2011, the Company's pro forma results for the three months ended March 31, 2011 would have been as follows:

(in thousands, except per share data)	2011
Revenue	$ 4,085
(Loss) from operations	(756)
Net income	10,430
Basic and diluted earnings per share:	
Continuing operations	$ 0.53
Discontinued operations	$ 0.00
Net income	$ 0.53
Basic and diluted weighted average shares	19,623

The primary adjustments relate to interest expense on long-term debt, the loss of interest income due to the timing of transaction related payments and amortization of intangible assets. The above pro forma information was determined based on historical results adjusted for the purchase price allocation and estimated related changes in income associated with the merger of CyDex.

3. Financial Instruments

The Company measures certain financial assets and liabilities at fair value on a recurring basis, including available-for-sale fixed income and equity securities and other equity securities. The following table provides a summary of the assets and liabilities that are measured at fair value on a recurring basis as of March 31, 2012 (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:				
Short-term investments	$ 1,517	$ 1,517	$ —	$ —
Liabilities:				
Current portion of liability for contingent value rights - CyDex	$ 2,449	$ —	$ —	$ 2,449
Liability for contingent value rights - Metabasis	—	—	—	—
Liability for contingent value rights – Neurogen	700	—	—	700
Liability for contingent value rights - CyDex	9,850	—	—	9,850
Total liabilities	$12,999	$ —	$ —	$ 12,999

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, 2011 (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:				
Short-term investments	$10,000	$ 10,000	$ —	$ —
Liabilities:				
Current portion of liability for contingent value rights - CyDex	$ 6,879	$ —	$ —	$ 6,879
Liability for contingent value rights - Metabasis	1,068	1,068	—	—
Liability for contingent value rights - Neurogen	700	—	—	700
Liability for contingent value rights - CyDex	9,665	—	—	9,665
Total liabilities	$18,312	$ 1,068	$ —	$ 17,244

The Company's short-term investments are fixed income available-for-sale securities and include Corporate Notes, Corporate Discount Commercial Paper and certificates of deposit. The fair value of the Company's short-term investments and liability for contingent value rights- Metabasis are determined using quoted market prices in active markets.

4. AVINZA Co-Promotion

In February 2003, Ligand and Organon Pharmaceuticals USA Inc. (Organon) announced that they had entered into an agreement for the co-promotion of AVINZA. Subsequently in January 2006, Ligand signed an agreement with Organon that terminated the AVINZA co-promotion agreement between the two companies and returned AVINZA co-promotion rights to Ligand. In consideration of the early termination, Ligand agreed to make quarterly royalty payments to Organon equal to 6.5% of AVINZA net sales through December 31, 2012 and thereafter 6.0% through patent expiration, currently anticipated to be November of 2017.

In February 2007, Ligand and King Pharmaceuticals, Inc., or King, executed an agreement pursuant to which King acquired all of the Company's rights in and to AVINZA. King also assumed the Company's co-promote termination obligation to make royalty payments to Organon based on net sales of AVINZA. For the fourth quarter of 2006 and through the closing of the AVINZA sale transaction, amounts owed by Ligand to Organon on net reported sales of AVINZA did not result in current period expense, but instead were charged against the co-promote termination liability. The liability was adjusted at each reporting period to fair value and was recognized, utilizing the interest method, as additional co-promote termination charges for that period at a rate of 15%, the discount rate used to initially value this component of the termination liability.

In connection with King's assumption of this obligation, Organon did not consent to the legal assignment of the co-promote termination obligation to King. Accordingly, Ligand remains liable to Organon in the event of King's default of the obligation. Therefore, Ligand recorded an asset as of February 26, 2007 to recognize King's assumption of the obligation, while continuing to carry the co-promote termination liability in the Company's consolidated financial statements to recognize Ligand's legal obligation as primary obligor to Organon. This asset represents a non-interest bearing receivable for future payments to be made by King and is recorded at its fair value. The receivable and liability will remain equal and adjusted each quarter for changes in the fair value of the obligation including for any changes in the estimate of future net AVINZA product sales. This receivable will be assessed on a quarterly basis for impairment (e.g. in the event King defaults on the assumed obligation to pay Organon).

On an annual basis, management reviews the carrying value of the co-promote termination liability. Due to assumptions and judgments inherent in determining the estimates of future net AVINZA sales through November 2017, the actual amount of net AVINZA sales used to determine the current fair value of the Company's co-promote termination asset and liability may be materially different from current estimates.

A summary of the co-promote termination liability as of March 31, 2012 is as follows (in thousands):

Net present value of payments based on estimated future net AVINZA product sales as of December 31, 2011	$21,452
Assumed payments made by King or assignee	(878)
Fair value adjustments due to passage of time	(450)
Total co-promote termination liability as of March 31, 2011	20,124
Less: current portion of co-promote termination liability as of December 31, 2011	5,898
Long-term portion of co-promote termination liability as of December 31, 2011	$14,226

5. Property Leases

The Company entered into a lease for a period of 27 months commencing October 2009, for premises consisting of approximately 30,000 square feet of office and lab space located in San Diego to serve as its corporate headquarters. Under the terms of the lease, the Company pays a basic annual rent of $1.2 million (subject to an annual fixed percentage increase, as set forth in the agreement), plus other normal and necessary expenses associated with the lease. In October 2011, the Company entered into an extension of the lease through June 30, 2012, for a portion of the premises. Under the terms of the extension, beginning on January 1, 2012, the Company will pay monthly rent of $26,448, plus other normal and necessary expenses associated with the lease.

On September 5, 2011, the Company entered into a new lease for a period of 84 months commencing July 1, 2012, for premises consisting of approximately 16,500 square feet of office and laboratory space located in San Diego to serve as its new corporate headquarters. Pursuant to the terms of the lease, annual base rent will be approximately $0.5 million, subject to a 3% annual increase.

The Company leases approximately 1,500 square feet of laboratory space located at the Bioscience and Technology Business Center in Lawrence, Kansas leased through December 31, 2014. Pursuant to the terms of the lease, annual base rent will be approximately $0.1 million.

The Company leases an office and research facility in San Diego, California under an operating lease arrangement through July 2015. The Company fully vacated this facility in February 2008. The lease agreement provides for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases ranging from 3% to 7%. Commencing January 2008, the Company sublet this facility through July 2015. The sublease agreement provides for a 3% increase in annual rents. As of March 31, 2012 and December 31, 2011, the lease exit obligation related to this lease was $3.8 million and $3.9 million, respectively.

The Company leases approximately 99,000 square feet in three facilities in Cranbury, New Jersey under leases that expire in 2016. The leases for the New Jersey facilities provide generally for scheduled rent increases, options to extend the leases with certain changes to the terms of the lease agreement, and refurbishment allowances. Commencing September 2009, the Company sublet 5,100 square feet of space through August 2014. As of March 31, 2012, the Company expects to receive $0.2 million in aggregate future lease payments over the duration of the sublease agreement.

In September 2010, the Company ceased use of its facility located in New Jersey. As a result, during the quarter ended September 30, 2010, the Company recorded lease exit costs of $9.7 million for costs related to the difference between the remaining lease obligations of the abandoned operating leases, which run through August 2016, and management's estimate of potential future sublease income, discounted to present value. As of March 31, 2012 and December 31, 2011, the lease exit obligation related to this lease was $7.1 million and $7.6 million, respectively.

6. Segment Reporting

Under Accounting Standards Codification No. 280, "Segment Reporting", or ASC 280, operating segments are defined as components of an enterprise about which separate financial information is available that is regularly evaluated by the entity's chief operating decision maker, in deciding how to allocate resources and in assessing performance. The Company has evaluated this Codification and has identified two reportable segments: the development and commercialization of drugs using CAPTISOL technology by the recently acquired CyDex Pharmaceuticals, Inc. and the traditional biotech operations including drug discovery and development of Ligand Pharmaceuticals, Inc. We evaluate performance based on the operating profit (loss) of the respective business segments. The segment results may not represent actual results that would be expected if they were independent, stand-alone businesses. Segment information was as follows:

	Ligand	CyDex	Total
For the three months Ended March 31, 2012:			
Net revenues from external customers	$ 4,101	$ 1,535	$ 5,636
Operating profit (loss)	(314)	(451)	(765)
Depreciation and amortization expense	72	606	678
Income tax expense (benefit) from continuing operations	(35)	—	(35)
Income tax expense from discontinuing operations	177		177
Interest expense	792	—	792
Assets	79,112	32,686	111,798

7. Debt

In January 2011, in connection with the acquisition of CyDex, the Company entered into a $20 million Loan and Security Agreement (the "Oxford Loan") with Oxford Finance Corporation ("Oxford"). Under the terms of the Oxford Loan agreement, the Company will make interest only payments for one year at a fixed rate of 8.64%, with an option to extend the interest only payments for an additional year. Subsequent to the interest only payments, the note will amortize with principal and interest payments due through the remaining term of the loan. The loan term, including interest only payments, is 42 months.

Upon final repayment of the Oxford Loan on the maturity date, by prepayment, or upon acceleration of the Oxford Loan, the Company also must make an additional final payment of $1.2 million, which is being accreted over the term of the loan. To secure the Company's repayment obligations under the Oxford Loan, Oxford obtained a first priority security interest in all of the Company's assets, excluding intellectual property.

On January 23, 2012, the Company and Oxford Finance LLC amended the Loan and Security Agreement (the "Amended Loan and Security Agreement"). The Amended Loan and Security Agreement increased the secured term loan credit facility from $20 million up to $30 million; the Company immediately borrowed $7.5 million of the additionally-authorized $10 million against two Secured Promissory Notes. The Company did not elect to borrow the remaining available $2.5 million. The additional $7.5 million loan bears interest at (and the additional $2.5 million loan would bear interest at) a fixed rate equal to the greater of (i) 8.81% per year and (ii) the sum of (a) 8.34% plus (b) the 3-month LIBOR rate reported in The Wall Street Journal three business days before the loan amounts are funded to the Company, which interest, along with amortized principal, is payable on a monthly basis. The Company must also make an additional final payment at maturity equal to 6% of the total amount borrowed under the Amended Loan and Security Agreement. Amortization of the entire $27.5 million due to Oxford commences on March 1, 2013 and the maturity date of the term loans is August 1, 2014. The other material terms of the Loan and Security Agreement remain unchanged.

The Company also has a cash-collateralized revolving line of credit facility with its commercial bank, Square 1 Bank, or Square 1, to borrow up to $10 million. All outstanding amounts under the credit facility bear interest at a floating rate equal to 200 basis points above the prime rate and may become immediately due and payable if the

Company fails to maintain a cash balance at Square 1 equal to the amount outstanding under the credit facility. Interest is payable on a monthly basis. The maturity date of the revolving line of credit facility is March 29, 2013. As of March 31, 2012 and December 31, 2011, the Company had an outstanding balance due under the credit facility of $1.5 million and $10.0 million, respectively.

8. Stockholders' Equity

Stock Option Activity

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

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term in Years	Aggregate Intrinsic Value (In thousands)
Balance at December 31, 2011	1,146,046	$ 25.77	7.96	$ 1,489
Granted	595,500	14.44		
Exercised	(14,958)	10.27		
Forfeited	(55,344)	10.05		
Cancelled	(8,726)	46.78		
Balance at March 31, 2012	1,662,518	14.56		
Exercisable at March 31, 2012	566,578	18.38	7.01	1,473
Options vested and expected to vest as of March 31, 2012	1,662,518	14.56	8.54	5,160

The weighted-average grant date fair value of all stock options granted during the three months ended March 31, 2012 was $14.44 per share. The total intrinsic value of all options exercised during the three months ended March 31, 2012 and 2011 was approximately $0.1 million and $1,000, respectively. As of March 31, 2012, there was $6.6 million of total unrecognized compensation cost related to nonvested stock options. That cost is expected to be recognized over a weighted-average period of 3 years.

As of March 31, 2012, 0.1 million shares were available for future option grants or direct issuance under the Company's 2002 Stock Incentive Plan, as amended.

Restricted Stock Activity

Restricted stock activity for the three months ended March 31, 2012 is as follows:

	Shares	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2011	115,506	$ 10.63
Granted	69,030	14.47
Vested	(30,807)	11.74
Forfeited	(1,326)	10.06
Nonvested at March 31, 2012	152,403	17.05

The weighted-average grant-date fair value of restricted stock granted during the three months ended March 31, 2012 was $14.47 per share. As of March 31, 2012, there was $1.3 million of total unrecognized compensation cost related to nonvested restricted stock. That cost is expected to be recognized over a weighted-average period of 2 years.

Employee Stock Purchase Plan

The Company's Employee Stock Purchase Plan, as amended and restated (the "Amended ESPP") allows participants to purchase up to 1,250 shares of Ligand common stock during each offering period, but in no event may a participant purchase more than 1,250 shares of common stock during any calendar year. The length of each offering period is six months, and employees are eligible to participate in the first offering period beginning after their hire date.

The Amended ESPP allows employees to purchase Ligand common stock at the end of each six month period at a price equal to 85% of the lesser of fair market value on either the start date of the period or the last trading day of the period (the "Lookback Provision"). The 15% discount and the Lookback Provision make the Amended ESPP compensatory. There were no shares of common stock issued under the Amended ESPP during the three months ended March 31, 2012 and 2011. The Company recorded compensation expense related to the ESPP of $6,000 and $1,000 for the three months ended March 31, 2012 and 2011, respectively. As of March 31, 2012, 97,291 shares were available for future purchases under the Amended ESPP.

Warrants

As of March 31, 2012, warrants to purchase 144,606 shares of the Company's common stock were outstanding with an exercise price of $51.54 per share and an expiration date of April 2012. The warrants were assumed in the acquisition of Pharmacopeia, Inc.

As of March 31, 2012, 163,568 warrants with an exercise price of $179.40 per warrant and an expiration date of April 2013 were outstanding to purchase an aggregate of 129,360 shares of the Company's common stock. If exercised, these warrants are also entitled to receive $0.1 million in cash and 981,411 of each of the Company's four contingent value rights issued to Neurogen shareholders in December 2009. The series of warrants was assumed in the acquisition of Neurogen Corporation.

Share Repurchases

On June 15, 2010, the Company announced that its Board of Directors has authorized the Company to repurchase up to $10.0 million of its common stock from time to time in privately negotiated and open market transactions for a period of up to two years, subject to the Company's evaluation of market conditions, applicable legal requirements and other factors. The Company is not obligated to acquire common stock under this program and the program may be suspended at any time. Through March 31, 2012, the Company repurchased 16,905 shares of its common stock totaling $0.1 million.

9. Litigation

From time to time the Company is subject to various lawsuits and claims with respect to matters arising out of the normal course of its business. If, based on the Company's assessment, it is probable that a liability has been incurred and can be reasonably estimated, then such loss is accrued and charged to operations. Management believes all costs that can be reasonably estimated will not exceed the related existing accruals.

10. Common Stock Subject to Conditional Redemption - Pfizer Settlement Agreement

In April 1996, the Company and Pfizer entered into a settlement agreement with respect to a lawsuit filed in December 1994 by the Company against Pfizer. In connection with a collaborative research agreement the Company entered into with Pfizer in 1991, Pfizer purchased shares of the Company's common stock. Under the terms of the settlement agreement, at the option of either the Company or Pfizer, milestone and royalty payments owed to the Company can be satisfied by Pfizer by transferring to the Company shares of the Company's common stock at an exchange ratio of $74.25 per share, for revenue related to lasofoxifene and

drolofoxifene. The remaining common stock issued and outstanding to Pfizer following the settlement was reclassified as common stock subject to conditional redemption (between liabilities and equity) since Pfizer has the option to settle milestone and royalties payments owed to the Company with the Company's shares, and such option is not within the Company's control. The remaining shares of the Company's common stock that could be redeemed totaled 112,371 and are reflected at the exchange ratio price of $74.25. Pfizer has notified Ligand that the development of the two compounds covered under the 1996 settlement agreement have been terminated and thus the Company reclassified the shares and the current carrying amount of $8.3 million to permanent equity for the period ending March 31, 2012.

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

Caution: This discussion and analysis may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed in Part II, Item 1A "Risk Factors." This outlook represents our current judgment on the future direction of our business. These statements include those related to our 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 royalties 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 release publicly the results of 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.

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 our wholly owned subsidiaries—Seragen, Inc. ("Seragen"); Nexus Equity VI LLC ("Nexus"); Pharmacopeia, LLC; Neurogen Corporation; Metabasis Therapeutics, Inc.; and CyDex Pharmaceuticals, Inc.

Overview

We are a biotechnology company that operates with a simple business model focused on developing or acquiring revenue generating assets and coupling them to a lean corporate cost structure. Our goal is to create a sustainably profitable business and generate meaningful value for our stockholders. Since a portion of our business model is based on the goal of partnering with other pharmaceutical companies to commercialize and market our assets, a significant amount of our revenue is based largely on payments made to us by partners for royalties, milestones and license fees. We recognized the important role of the drug reformulation segment in the pharmaceutical industry and in 2011 added CAPTISOL® to our technology portfolio. CAPTISOL is a formulation technology that has enabled five FDA approved products, including Pfizer's VFEND® IV and Baxter International's Nexterone® and is currently being used in a number of clinical-stage partner programs. In comparison to our peers, we believe we have assembled one of the largest and most diversified asset portfolios in the industry with the potential to generate significant revenue in the future. In addition, therapies in development address the unmet medical needs of patients for a broad spectrum of diseases including hepatitis, muscle wasting, Alzheimer's disease, dyslipidemia, diabetes, anemia, asthma, rheumatoid arthritis and osteoporosis. We have established multiple alliances with the world's leading pharmaceutical companies including GlaxoSmithKline, Merck, Pfizer, Baxter International, Bristol-Myers Squibb, Celgene, Onyx Pharmaceuticals, Lundbeck Inc., Eli Lilly & Company, and The Medicines Company.

In December 2011, we entered into a License and Supply Agreement with Hospira, Inc. Under the Agreement, we granted a license in specified territories, with sub-license rights, to such intellectual property rights that will enable the manufacture and sale of certain finished drug products of which CAPTISOL® is a component. Under the terms of the Agreement we received a non-refundable license fee of $0.5 million. In addition, we received a pre-payment of $2.5 million, to be applied as a credit toward the first $2.5 million of CAPTISOL supplied under the Agreement. In the event of a termination prior to us supplying $2.5 million of CAPTISOL, we will refund the difference of the value of CAPTISOL supplied and the $2.5 million pre-payment. We are also eligible to receive milestone payments upon the occurrence of certain specified sales goals.

In December 2011, our partner Onyx Pharmaceuticals, Inc., or Onyx, announced that the U.S. Food and Drug Administration, or FDA, had granted Standard Review designation to the New Drug Application, or NDA, for carfilzomib for the potential treatment of patients with relapsed and refractory multiple myeloma. The Oncologic Drugs Advisory Committee (ODAC), which advises the FDA regarding the potential approval of new cancer drugs, will meet on June 20, 2012 to review the carfilzomib application. Carfilzomib is also currently being evaluated in two Phase 3 clinical trials. Under our agreement with Onyx, we are entitled to milestones, royalties and revenue from CAPTISOL material sales.

In February 2012, we announced that we had licensed the full world-wide rights to DARA (a Dual Acting Receptor Antagonist of Angiotension and Endothelin receptors) to Retrophin, LLC ("Retrophin"). Retrophin intends to develop DARA for orphan indications of severe kidney diseases including Focal Segmental Glomerulosclerosis (FSGS) as well as conduct proof-of-concept studies in resistant hypertension and diabetic nephropathy. Certain patient groups with severely compromised renal function exhibit extreme proteinuria resulting in progression to dialysis and a high mortality rate. DARA, with its unique dual blockade of angiotensin and endothelin receptors, is expected to provide meaningful clinical benefits in mitigating proteinuria in indications where there are no approved therapies. We received a net up front payment of approximately $1 million, and may receive, net of amounts owed to third parties, over $75 million in milestones as well as 9% in royalties on potential future worldwide sales by Retrophin.

In April 2012, GSK announced that they are preparing to file a sNDA for PROMACTA. GSK has recently completed two large Phase III studies (ENABLE 1 and 2) designed to demonstrate PROMACTA's value in treatment of thrombocytopenia in patients with Hepatitis C.

Metabasis Contingent Value Rights

In January 2010, we completed our acquisition of Metabasis. In addition to cash consideration, we issued four tradable Contingent Value Rights ("CVRs"), one CVR from each of four respective series of CVRs, for each Metabasis share. The CVRs will entitle the holder to cash payments as frequently as every six months as cash is received by us from the sale or partnering of any of the Metabasis drug development programs, among other triggering events. We have also committed to spend at least $7 million within 30 months and $8 million within 42 months, in new research and development funding on the Metabasis programs. Through March 31, 2012, we estimate that we have spent approximately $5.9 million of the committed amount.

In January 2011, we entered into a strategic relationship with Chiva Pharmaceuticals, Inc. to develop multiple assets and technology in China and potentially worldwide. Chiva was granted licenses to begin immediate development in China of two clinical-stage HepDirect programs, Pradefovir for hepatitis B and MB01733 for hepatocellular carcinoma. Additionally, we granted Chiva a non-exclusive HepDirect technology license for the discovery, development and worldwide commercialization of new compounds in hepatitis B (HepB), hepatitis C (HepC) and hepatocellular carcinoma (HCC). Under the terms of the agreement, we are entitled to milestones and royalties on potential sales. In addition, we are entitled to receive a portion of any sublicensing revenue generated from sublicensing of collaboration compounds to third parties in a major world market. We received a $0.5 million license payment in March 2011, of which $0.1 million was remitted to CVR holders.

In August 2011, we entered into an amendment to the license agreement which required that a second $0.5 million licensing fee be paid in September 2011. In addition, the amendment increased royalty rates which we may receive under the license agreement to 6% of net sales of products (other than Pradefovir) and 9% of net sales for Pradefovir. In addition, the amendment removed from the license agreement a provision that afforded us the potential to earn a 10% equity position in Chiva as a milestone payment. In September 2011, Chiva paid us the $0.5 million licensing fee called for by the amendment, of which $0.1 million was remitted to CVR holders.

Results of Operations

Three Months Ended March 31, 2012 and 2011

Total revenues for the three months ended March 31, 2012 were $5.6 million compared to $3.9 million for the same period in 2011. We reported a loss from continuing operations of $0.5 million compared to income from continuing operations of $10.0 million for the three months ended March 31, 2012 and 2011, respectively.

Royalty Revenue

Royalty revenues were $3.1 million for the three months ended March 31, 2012, compared to $2.0 million for the same period in 2011. The increase in royalty revenues is due to an increase in PROMACTA royalties partially offset by a decrease in AVINZA royalties.

Material Sales

We recorded material sales of $0.7 million compared to $1.0 million for the three months ended March 31, 2012 and 2011, respectively. The decrease in material sales is due to the timing of customer purchases.

Collaborative Research and Development and Other Revenues

We recorded collaborative research and development and other revenues of $1.9 million and $0.9 million for the three months ended March 31, 2012 and 2011, respectively. Revenue for the three months ended March 31, 2012, consisted primarily of $1.0 million, net of amounts owed, for the licensing of the full world wide rights of DARA to Retrophin as well as up-front fees from CAPTISOL related programs. Revenue for the three months ended March 31, 2011 consisted of up-front fees from CAPTISOL related programs of $0.4 million and a net fee of $0.4 million from licenses granted to Chiva Pharmaceuticals, Inc. to begin development in China of two clinical-stage HepDirect programs.

Research and Development Expenses

The major components of research and development expenses are as follows (in thousands):

	Three Months Ended March 31,	
	2012	2011
Internal research programs	$2,565	$ 1,819
Development	252	167
Total research and development	$2,817	$ 1,986

Research and development expenses were $2.8 million compared to $2.0 million for the three months ended March 31, 2012 and 2011, respectively. The increase of $0.8 million for the three months ended March 31, 2012, compared to the same period in 2011, is primarily due to an increase in project spending of $0.7 million and an increase in amortization of intangible assets related to the CyDex acquisition of $0.1 million.

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

Program	Disease/Indication	Development Phase
Selective Androgen Receptor Modulators (SARMs) (agonists)	Muscle wasting and frailty	Phase I
CAPTISOL-Enabled Melphalan IV	Oncology	Pivotal
CAPTISOL-Enabled Topiramate IV	Epilepsy/Seizures	Preclinical
Glucagon receptor antagonists	Diabetes	Preclinical

We do not provide forward-looking estimates of costs and time to complete our ongoing research and development projects as such estimates would involve a high degree of uncertainty. Uncertainties include our inability to predict the outcome of complex research, our inability to predict the results of clinical studies, regulatory requirements placed upon us by regulatory authorities such as the FDA and EMEA, 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 $3.5 million and $3.4 million for the three months ended March 31, 2012 and 2011, respectively.

Lease Exit and Termination Costs

In September 2010, we ceased use of our facility located in Cranbury, New Jersey. As a result, during the quarter ended September 30, 2010, we recorded lease exit costs of $9.7 million for costs related to the difference between the remaining lease obligations of the abandoned operating leases, which run through August 2016, and management’s estimate of potential future sublease income, discounted to present value. Actual future sublease income may differ materially from our estimate, which would result in us recording additional expense or reductions in expense. In addition, we wrote-off approximately $5.4 million of property and equipment related to the facility closure and recorded approximately $1.8 million of severance related costs. We recorded $0.1 million and $0.2 million as a reduction of lease exit and termination costs for the three months ending March 31, 2012 and 2011, respectively.

Accretion of Deferred Gain on Sale Leaseback

On November 9, 2006, we sold real property located in San Diego, California for a sale price of $47.6 million. This property included our corporate headquarter building totaling approximately 82,500 square feet, the land on which the building was situated, and two adjacent vacant lots. As part of the sale transaction, we agreed to leaseback the building for a period of 15 years. We recognized an immediate pre-tax gain on the sale transaction of $3.1 million and deferred a gain of $29.5 million on the sale of the building. The deferred gain was being recognized on a straight-line basis over the 15 year term of the lease at a rate of approximately $2.0 million per year. In August 2009, we entered into a lease termination agreement for this building. As a result, we recognized $20.4 million of accretion of deferred gain during the quarter ended September 30, 2009, and recognized the remaining balance of the deferred gain through the term of our new building lease, which expired in December 2011. The amount of the deferred gain recognized for the three months ended March 31, 2011 was $0.4 million.

Interest Income, net

Interest income was $17,000 compared to $37,000 for the three months ended March 31, 2012 and 2011, respectively. The decrease in interest income in 2012 was due to lower cash and investment balances.

Interest Expense

Interest expense was $0.8 million compared to $0.4 million for the three months ended March 31, 2012 and 2011, respectively. The increase in interest expense of $0.4 million was due to the increase in the outstanding balance of notes payable at March 31, 2012 compared to March 31, 2011. Additionally, the $20 million loan obtained to acquire CyDex was outstanding for a partial period for the three months ending March 31, 2011.

Change in liability for Contingent Value Rights

We recorded a decrease in liability for CVRs of $0.8 million for the three months ended March 31, 2012, compared to an increase in liability for CVRs of $1.7 million for the three months ended March 31, 2011. The decrease for the three months ended March 31, 2012 relates to a decrease in our liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition, partially offset by an increase in the liability for amounts due to holders of CVRs associated with our CyDex acquisition. The increase for the three months ending March 31, 2011 relates to our liability for amounts potentially due to holders of CVRs associated with our Metabasis acquisition. The initial fair value of the liability was determined using quoted market prices of Metabasis common stock in active markets. The liability is subsequently marked-to-market at each reporting period based upon the quoted market prices of the underlying CVR, and the change in fair value is recorded in our consolidated statements of operations. The carrying amount of the liability may fluctuate significantly based upon quoted market prices and actual amounts paid under the CVR agreements may be materially different than the carrying amount of the liability.

Other, net

We recorded other income of $0.3 million compared to $48,000 for the three months ending March 31, 2012 and 2011, respectively. Other income for 2012 primarily relates to income related to the release of obligations previously recorded associated with the acquisition of CyDex.

Income Taxes

We recorded an income tax benefit of $35,000 and $13.6 million for the three months ended March 31, 2012 and 2011, respectively. The income tax benefit for the three months ended March 31, 2012 relates to losses from continuing operations which may be used to offset income from discontinued operations. The income tax benefit for the three months ended March 31, 2011 relates to the release of a portion of our valuation allowance against deferred tax assets which can be used to offset deferred tax liabilities recorded in connection with our acquisition of CyDex in January 2011.

Discontinued Operations

Oncology Product Line

On September 7, 2006, we and Eisai Inc., a Delaware corporation, and Eisai Co., Ltd., a Japanese company (which we collectively refer to as Eisai), entered into a purchase agreement, or the Oncology Purchase Agreement, pursuant to which Eisai agreed to acquire all of our worldwide rights in and to our oncology products, including, among other things, all related inventory, equipment, records and intellectual property, and assume certain liabilities as set forth in the Oncology Purchase Agreement. The Oncology product line included our four marketed oncology drugs: ONTAK, TARGRETIN capsules, TARGRETIN gel and PANRETIN gel.

Pursuant to the terms of the Oncology Purchase Agreement, we retained the liability for returns of product from wholesalers that had been sold by us prior to the close of the transaction. Accordingly, as part of the accounting for the gain on the sale of the Oncology product line, we recorded a reserve for Oncology product returns.

During the three months ended March 31, 2012 and 2011, we recognized $0 and $4,000, respectively, of pre-tax gains due to subsequent changes in certain estimates and liabilities recorded as of the sale date.

AVINZA Product Line

On September 6, 2006, we and King entered into a purchase agreement, or the AVINZA Purchase Agreement, pursuant to which King agreed to acquire all of our rights in and to AVINZA in the United States, its territories and Canada, including, among other things, all AVINZA inventory, records and related intellectual property, and assume certain liabilities as set forth in the AVINZA Purchase Agreement, which we collectively refer to as the Transaction.

Pursuant to the terms of the AVINZA Purchase Agreement, we retained the liability for returns of product from wholesalers that had been sold by us prior to the close of the Transaction. Accordingly, as part of the accounting for the gain on the sale of AVINZA, we recorded a reserve for AVINZA product returns.

During the three months ended March 31, 2012 and 2011, we recognized pre-tax gains of $2.0 million and $0, respectively, due to subsequent changes in certain estimates and liabilities recorded as of the sale date.

Income Taxes

We recorded an income tax expense of $0.2 million for income taxes related to discontinued operations for the three months ended March 31, 2012. The income tax expense relates to income recognized as a result of changes in certain estimates of liabilities. We did not record any provision for income taxes for the period ending March 31, 2011 as we did not realize any taxable income from discontinued operations.

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 revenues, capital and operating lease transactions.

We have incurred significant losses since inception. At March 31, 2012, our accumulated deficit was $680.4 million and we had negative working capital of $3.7 million. We believe that cash flows from operations will improve due to consistent CAPTISOL® sales, an increase in royalty revenues driven primarily from continued increases in PROMACTA sales, as well as anticipated new license and milestone revenues. In the event revenues and operating cash flows do not meet expectations, management plans to reduce discretionary expenses. However, it is possible that we may be required to seek additional financing. There can be no assurance that additional financing will be available on terms acceptable to management, or at all. We believe our available cash, cash equivalents, and short-term investments as well as our current and future royalty, license and milestone revenues will be sufficient to satisfy our anticipated operating and capital requirements, through at least the next twelve months. Our future operating and capital requirements will depend on many factors, including, but not limited to: the pace of scientific progress in our research and development programs; the potential success of these programs; the scope and results of preclinical testing and clinical trials; the time and costs involved in obtaining regulatory approvals; the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims; competing technological and market developments; the amount of royalties on sales of the commercial products of our partners; the efforts of our collaborative partners; obligations under our operating lease agreements; and the capital requirements of any companies we acquire, including Pharmacopeia, Inc. (“Pharmacopeia”), Neurogen Corporation (“Neurogen”), Metabasis Therapeutics, Inc. (“Metabasis”) and CyDex Pharmaceuticals, Inc. (“CyDex”). Our ability to achieve our operational targets is dependent upon our ability to further implement our business plan and generate sufficient operating cash flow.

In January 2011, we used $12.0 million of our existing cash, cash equivalents and short-term investments for the acquisition of CyDex. In connection with the acquisition, we entered into a $20 million Loan and Security Agreement, or the Loan Agreement, with Oxford Financial Group. Under the terms of the Loan Agreement, we made interest only payments for one year at a fixed rate of 8.64%, with an option to extend the interest only payments for an additional year, which we exercised on January 18, 2012. The interest only payments will continue through March 1, 2013. This election did not change the August 1, 2014 maturity date of the term loan.

In March 2011, we entered into a Loan and Security Agreement, or the Commercial Loan, with our commercial bank, Square 1 Bank, or Square 1. The Commercial Loan established a cash-collateralized revolving line of credit facility under which Square 1 agreed to loan up to $5.0 million to us. We immediately borrowed the full $5.0 million.

In April 2011, we entered into an amended Loan and Security Agreement (the "Square 1 Amended Loan") with Square 1. The Square 1 Amended Loan increased a cash-collateralized revolving line of credit facility by $5.0 million under which Square 1 agreed to loan up to $10.0 million to us. We immediately borrowed the additional $5.0 million. All outstanding amounts under the Agreement bear interest at a floating rate equal to 200 basis points above the prime rate. Interest is payable on a monthly basis. The maturity date of the revolving line of credit facility was March 29, 2012. On March 29, 2012, we entered into a Second Amendment to the Loan and Security Agreement (the "Square 1 Second Amendment to Loan and Security Agreement"). The Square 1 Second Amendment to Loan and Security Agreement changed the maturity date of the revolving line of credit facility to March 28, 2013. The Square 1 Second Amendment to Loan and Security Agreement did not change the interest rate and interest payment schedule established in the Loan and Security Agreement.

In October 2011, we filed a Registration Statement on Form S-3 with the Securities and Exchange Commission ("SEC") for the issuance and sale of up to $30 million of equity or other securities, proceeds from which will be used for general corporate purposes. The Form S-3 provides additional financial flexibility for the Company to sell shares or other securties as needed at any time. To date, no securities have been issued under this registration statement.

In January 2012, we entered into a Fourth Amendment to the Loan and Security Agreement with Oxford Financial Group. The Fourth Amendment to Loan and Security Agreement increased the Loan and Security Agreement's secured term loan credit facility from $20 million to up to $30 million; we immediately borrowed $7.5 million of the additionally-authorized $10 million against two Secured Promissory Notes. We did not elect to borrow the remaining available $2.5 million. The additional $7.5 million loan bears interest at a fixed rate equal to the greater of (i) 8.81% per year and (ii) the sum of (a) 8.34% plus (b) the 3-month LIBOR rate reported in The Wall Street Journal three business days before the loan amounts are funded to us, which interest, along with amortized principal, is payable on a monthly basis. Amortization of the entire $27.5 million due to Oxford commences on March 1, 2013 and the maturity date of the term loan is August 1, 2014, and the other material terms of the Loan and Security Agreement remain unchanged. Following the borrowing, we immediately paid down $4.5 million on our revolving credit facility. In addition, we paid down an additional $4.0 million on our revolving credit facility.

In connection with the acquisition of CyDex Pharmaceuticals, Inc. on January 24, 2011, we issued a series of Contingent Value Rights ("CVR"). We paid the CVR holders $4.3 million in January 2012 and may be required to pay up to an additional $9.5 million upon achievement of certain milestones. In 2011, $0.9 million was paid to the CyDex Shareholders upon completion of a licensing agreement with The Medicines Company for the CAPTISOL enabled Intravenous formulation of Clopidogrel. An additional $2 million was paid to the CyDex Shareholders upon acceptance by the FDA of the New Drug Application submitted by Onyx. In addition, we will pay CyDex shareholders, for each respective year from 2011 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. The Company paid $0.3 million to the CyDex shareholders in March 2012 for 20% of all 2011 CyDex-related revenue in excess of $15 million.

The CyDex CVR Agreement requires us to, in the event of a Default, deliver to an escrow agent the future cash payments described above, and such amounts would then be delivered by the escrow agent to the CyDex shareholders if, as and when they would have by the CVR Agreement been required to be delivered by us. "Default" includes the following, subject to certain cure rights: (a) we fail to pay to the Shareholders' Account any amount as and when required under the CVR Agreement, (b) at any time we are obligated for more than $35.0 million of financial indebtedness (other than financial indebtedness which is expressly subordinated to all obligations of Ligand under the CVR Agreement pursuant to a written subordination agreement signed by and reasonably acceptable to the Shareholders' Representative), (c) at any time after March 15, 2011 our cash, cash equivalents and

short-term investments is less than $10.0 million, or (d) we commit any material breach of the CVR Agreement. Pursuant to the CVR Agreement, the shareholders' representative on behalf of the former CyDex shareholders has recently filed a notice of objection with us regarding the calculation of payments due to the CyDex former shareholders for the first and second quarters of 2011. In addition, the shareholders' representative has claimed that we exceeded the $35 million financial indebtedness limitation contained in the CVR Agreement. We disagree with these claims and intends to work with the shareholders' representative to resolve the claims. If we and the shareholders' representative fail to agree, the claims may be resolved through arbitration.

We are also required by the CyDex CVR Agreement to dedicate at least five experienced full-time employee equivalents per year to the acquired business and to invest at least $1.5 million per year, inclusive of such employee expenses, in the acquired business, through 2015. As of March 31, 2012, we estimate we have spent approximately $1.2 million of our commitment for the year ending December 31, 2012.

Based on management's plans, including projected increases in CAPTISOL sales and royalty revenues, as well as anticipated new license revenue and expense reductions, if necessary, we believe our currently available cash, cash equivalents, and short-term investments as well as our current and future royalty, license and milestone revenues will be sufficient to satisfy our anticipated operating and capital requirements, through at least the next twelve months. Our future operating and capital requirements will depend on many factors, including, but not limited to: the pace of scientific progress in our research and development programs; the magnitude of these programs; the scope and results of preclinical testing and clinical trials; the time and costs involved in obtaining regulatory approvals; the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims; competing technological and market developments; the amount of royalties on sales of our partners' commercial products; the efforts of our collaborative partners; obligations under our operating lease agreements and lease termination agreement; and the capital requirements of any companies we may acquire, including Neurogen, Metabasis and Cydex. We believe that the actions presently being taken to generate sufficient operating cash flow provide the opportunity for us to continue as a going concern. 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. Our ability to achieve our operational targets is dependent upon our ability to further implement our business plan and generate sufficient operating cash flow.

Operating Activities

Operating activities used cash of $0.4 million for the three months ended March 31, 2012, compared to $0.9 million of cash generated for the three months ended March 31, 2011.

The cash used for the three months ended March 31, 2012 reflects net income of $1.4 million, adjusted by $1.9 million of gain from discontinued operations, net of income tax expense and $0.7 million of non-cash items to reconcile the net income to net cash used in opearations. These reconciling items primarily reflect stock based compensation of $0.7 million and depreciation of $0.7 million offset by the change in estimated fair value of contingent value rights of $0.7 million. The cash used during the three months ended March 31, 2012 is further impacted by changes in operating assets and liabilities due primarily to a decrease in deferred revenue of $0.6 million, other liabilities $3.5 million, and other current assets $0.5 million, partially offset by a decrease in accounts receivable of $4.1 million. Cash used in operating activities for the three months ended March 31, 2012 of $0.2 million related to discontinued operations.

The cash generated for the three months ended March 31, 2011 reflects net income of $10.0 million, adjusted by $4,000 of gain from discontinued operations and $2.2 million of non-cash items to reconcile the net income to net cash used in operations. These reconciling items primarily reflect the change in estimated fair value of contingent value rights of $1.7 million, depreciation and amortization of $0.6 million and stock-based compensation of $0.5million, partially offset by accretion of deferred gain on the sale leaseback of the building of $0.4 million and non-cash lease costs of $0.1 million. The cash generated during the three months ended March 31, 2011 is further impacted by changes in operating assets and liabilities due primarily to deferred income taxes of $13.9 million, an increase in other liabilities of $0.8 million, an increase in inventory of $1.8 million and a decrease in accounts payable and accrued liabilities of $1.0 million, partially offset by decreases in other current assets of $4.6 million, accounts receivable of $1.0 million and other long term assets of $0.5 million. None of the cash provided by operating activities for the three months ended March 31, 2011 related to discontinued operations.

Investing Activities

Investing activities provided cash of $3.9 million compared to cash used of $23.2 million for the three months ended March 31, 2012 and 2011, respectively.

Cash provided by investing activities during the three months ended March 31, 2012, primarily reflects $8.5 million of net proceeds from the sale of short-term investments, offset by $4.5 million paid to CyDex CVR holders.

Cash used by investing activities during the three months ended March 31, 2011 primarily reflects $32.0 million of cash paid for the acquisition of CyDex and $5.0 million for purchases of short-term investments, partially offset by $13.9 million of proceeds from the sale of short-term investments. None of the cash provided by investing activities for the three months ended March 31, 2011 related to discontinued operations.

Financing Activities

Financing activities used cash of $0.8 million for the three months ended March 31, 2012. Financing activities provided cash of $24.9 million for the three months ended March 31, 2011.

Cash used by financing activities for the three months ended March 31, 2012 primarily reflects $8.5 million for the repayment of debt, partially offset by $7.5 million of proceeds from the issuance of debt. Additionally, proceeds from the issuance of common stock resulted in $0.2 million of cash generated from financing activities.

Cash provided by financing activities for the three months ended March 31, 2011 primarily reflects $25.0 million of proceeds from the issuance of debt, partially offset by share repurchases of $0.1 million.

Other

In connection with the acquisition of Neurogen Corporation on December 23, 2009, Neurogen security holders received CVRs under four CVR agreements. The CVRs entitle Neurogen shareholders to cash payments upon the sale or licensing of certain assets and upon the achievement of a specified clinical milestone. At March 31, 2012 and December 31, 2011, the aggregate fair values of the Aplindore, VR1 and H3 CVR's were $0.7 million, and included in other long-term liabilities in the accompanying balance sheets as management is unable to estimate the timing of potential future payments.

In connection with the acquisition of Metabasis Therapeutics on January 27, 2010, Metabasis security holders received CVRs under four CVR agreements. The CVRs entitle the holders to cash payments upon the sale or licensing of certain assets and upon the achievement of specified milestones. The fair value of the liability at March 31, 1012 and December 31, 2011 was $0 and $1.1 million, respectively.

In connection with the acquisition of CyDex Pharmaceuticals, Inc. on January 24, 2011, we issued a series of Contingent Value Rights. We paid the CVR holders $4.3 million in January 2012 and may be required to pay up to an additional $9.5 million upon achievement of certain milestones. In 2011, $0.9 million was paid to the CyDex Shareholders upon completion of a licensing agreement with The Medicines Company for the CAPTISOL enabled Intravenous formulation of Clopidogrel. An additional $2 million was paid to the CyDex Shareholders upon acceptance by the FDA of Onyx's NDA. In addition, we will pay CyDex shareholders, for each respective year from 2011 through 2016, 20% of all CyDex-related revenue, but only to the extent that and beginning only when CyDex-related revenue for such year exceed $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 paid $0.3 million to the CyDex shareholders in March 2012 related to 2011 CyDex-related revenue. The estimated fair value of the liability at March 31, 2012 was $12.3 million.

Leases and off-balance sheet arrangements

We lease our office and research facilities under operating lease arrangements with varying terms through November 2021. The agreements provide for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases ranging from 3% to 7%. Commencing January 2008, we also sublease a portion of our facilities through July 2015. The sublease agreement provides for a 3% increase in annual rents. We had no off-balance sheet arrangements at March 31, 2012 and December 31, 2011.

Contractual Obligations

As of March 31, 2012, future minimum payments due under our contractual obligations are as follows (in thousands):

	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations (1)	$23,496	$ 5,529	$11,127	$5,826	$ 1,014

(1) We currently sublease two of our facilities through their respective lease terms of July 2015 and August 2016. As of March 31, 2012, we expect to receive aggregate future minimum lease payments totaling $4.4 million (nondiscounted) over the duration of the sublease agreements as follows: less than one year, $1.1 million; one to three years, $2.6 million; and three to five years, $0.7 million.

We outsource the production of CAPTISOL to Hovione, LLC. Under the terms of the supply agreement with Hovione, the Company has ongoing minimum annual purchase commitments and is required to purchase a total of $15 million of CAPTISOL over the term of the supply agreement which expires in December 2019. Through March 31, 2012 we have spent approximately $13.0 million towards that commitment. Either party may terminate the Agreement for the uncured material breach or bankruptcy of the other party or an extended force majeure event. The Company may also terminate the supply agreement for extended supply interruption, regulatory action related to CAPTISOL or other specified events.

Under the terms of our merger with Metabasis, we are committed to spend at least $7 million within 30 months following the close of the transaction and $8.0 million within 42 months in new research and development funding on the Metabasis programs. Through March 31, 2012, we estimate that we have spent approximately $5.9 million of the committed amount.

We are also required under our CyDex CVR Agreement to invest at least $1.5 million per year, inclusive of employee expenses, in the acquired business, through 2015. As of March 31, 2012, we estimate we have spent approximately $1.2 million.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

At March 31, 2012, our investment portfolio included fixed-income securities of $1.5 million. These securities are subject to interest rate risk and will decline in value if interest rates increase. However, due to the short duration of our investment portfolio, an immediate 10% change in interest rates would have no material impact on our financial condition, results of operations or cash flows. Declines in interest rates over time will, however, reduce our interest income.

We do not have a significant level of transactions denominated in currencies other than U.S. dollars and as a result we have very limited foreign currency exchange rate risk. We purchase CAPTISOL from Hovione, located in Lisbon, Portugal. Payments to Hovione are denominated and paid in US 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 have no material impact on our financial condition, results of operations or cash flows.

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 have no material impact on our financial condition, results of operations, or cash flows.

ITEM 4. CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, as of the end of the period covered by this report, which we refer to as the Evaluation Date.

As a result of a material weakness in our internal control over financial reporting relating to the accounting for significant non-routine transactions, our management has reassessed the effectiveness of our disclosure controls and procedures and have determined that our disclosure controls and procedures were not effective as of March 31, 2012. Despite the material weakness in our internal control, management believes no material inaccuracies or omissions of fact exist in this quarterly report.

Remediation Plan. Since the transaction date which resulted in this material weakness, we have added a corporate controller to our finance and accounting staff. While we had processes to identify and intelligently apply accounting standards to complex transactions, we did not have adequate numbers of highly skilled accountants to provide for a detail analysis, documentation and review of the acquisition of CyDex, which closed on January 24, 2011. This material weakness prevented us from properly reporting the financial information for previous interim periods, and we have filed restated 10-Q reports for the applicable periods. We enhanced our processes with the addition of a resource with the ability to research and understand the nuances of complex accounting standards. Management will continue to review and make necessary changes to the overall design of its internal control environment, as well as to policies and procedures to improve the overall effectiveness of internal control over financial reporting.

The material weakness will not be remediated until the applicable remedial procedures are tested and management has concluded that the procedures and controls are operating effectively.

Changes in Internal Controls. Except as described above, there have been no changes in our internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

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

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.

Risks Related To Us and Our Business.

Our business has recently undergone a significant change, and we may not be successful in integrating the CAPTISOL technology and CyDex's other development product candidates into our existing operations or in realizing the planned results from our recently expanded product portfolio and pipeline.

In January 2011, we completed our merger with CyDex, in which we obtained the CAPTISOL technology, in addition to other product candidates. We will need to overcome significant challenges in order to realize the benefits from this acquisition. These challenges will include the timely, efficient and successful execution of a number of tasks, including the following:

- integrating CyDex into our existing operations;
- integrating CyDex's developmental product candidates and successfully managing the development and regulatory processes; and
- coordinating with CyDex's and our collaborative partners concerning the development, manufacturing, regulatory and intellectual property protection strategies for CAPTISOL and new development product candidates.

In addition, we rely on our collaborative partners for many aspects of our developmental and commercialization activities, and we are subject to risks related to their financial stability and solvency. We may not succeed in addressing these risks or any other problems encountered in connection with the acquisition of CyDex.

Furthermore, all of CyDex's products and product candidates, as well as the technology that it outlicenses, are based on CAPTISOL. In addition, CyDex or its partners are attempting to develop some product candidates that may contain significantly higher levels of CAPTISOL than in any currently-approved productand has directed developers to demonstrate an adequate safety margin and specifically acceptable renal safety. If products or product candidates incorporating CAPTISOL technology were to cause any unexpected adverse events, whether in preclinical studies, clinical trials or as commercialized products, whether as a result of CAPTISOL or otherwise, the perception of CAPTISOL safety could be seriously harmed. If this were to occur, we may not be able to market these products unless and until we are able to demonstrate that the adverse event was unrelated to CAPTISOL, which we may not be able to do. Further, whether or not the adverse event was a result of CAPTISOL, we could be required by the FDA to submit to additional regulatory reviews or approvals, including extensive safety testing or clinical testing of products using CAPTISOL, which would be expensive and, even if we were to demonstrate that the adverse event was unrelated to CAPTISOL, would delay our marketing of CAPTISOL-enabled products and receipt of revenue related to those products.

Royalties based on sales of AVINZA and PROMACTA represent a substantial portion of our revenues.

Pfizer, as successor to King is obligated to pay us royalties based on its sales of AVINZA and GSK is obligated to pay us royalties on its sales of PROMACTA. These royalties are expected to be a substantial portion of our ongoing revenues for some time. As a result, any setback that may occur with respect to AVINZA or PROMACTA could significantly impair our operating results and/or reduce the market price of our stock. Setbacks for AVINZA and PROMACTA could include problems with shipping, distribution, manufacturing, product safety, marketing, government regulation, 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 or discounts.

AVINZA or PROMACTA could also face regulatory action and product safety issues. For example, the FDA previously requested expanded warnings on the AVINZA label to alert doctors and patients to the dangers of using AVINZA with alcohol. Changes were subsequently made to the label. The FDA also requested clinical studies to investigate the risks associated with taking AVINZA with alcohol. Any additional warnings, studies and any further regulatory action could have significant adverse effects on AVINZA sales.

In September 2007, King reported that Actavis, a manufacturer of generic pharmaceutical products headquartered in Iceland, had filed with the FDA an Abbreviated New Drug Application, or ANDA, with a Paragraph IV Certification pertaining to AVINZA, the rights to which were acquired by King from us in February 2007. According to the report, Actavis's Paragraph IV Certification sets forth allegations that U.S. Patent No. 6,066,339, or the 339 patent, which pertains to AVINZA, and which is listed in the FDA's Approved Drug Products With Therapeutic Equivalence Evaluations, will not be infringed by Actavis's manufacture, use, or sale of the product for which the ANDA was submitted. The expiration date for this patent is November 2017. King, King Pharmaceuticals Research and Development, Inc., Elan Corporation, plc, or Elan, and Elan Pharma International Ltd. jointly filed suit in federal district court in New Jersey on October 18, 2007 against Actavis, Inc. and Actavis Elizabeth LLC for patent infringement under the 339 patent. The lawsuit was settled and dismissed without prejudice in July 2011.

In July 2009, King Pharmaceuticals Research and Development, Inc., Elan and Elan Pharma International Ltd. jointly filed suit in federal district court in New Jersey against Sandoz Inc., or Sandoz, for patent infringement under the 339 patent. According to the complaint, Sandoz filed an ANDA for morphine sulfate extended release capsules and, in connection with the ANDA filing, Sandoz provided written certification to the FDA alleging that the claims of the 339 patent are invalid, unenforceable and/or will not be infringed by the manufacture, use or sale of Sandoz's proposed morphine product. Similar to the lawsuit against Actavis, this lawsuit seeks a judgment that would, among other things, prevent Sandoz from commercializing its proposed morphine product until after expiration of the 339 patent. Trial was previously expected to be set to start during the second half of 2011, but the court ordered a stay of proceedings starting on May 2, 2011. An adverse judgement on the patent could significantly impact our future revenues.

Our product candidates face significant development and regulatory hurdles prior to marketing which could delay or prevent sales and/or milestone revenue.

Before we or our partners obtain the approvals necessary to sell any of our potential products, we must show through preclinical studies and human testing that each product is safe and effective. We and our partners have a number of products 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 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. Recently, a number of companies have suffered significant setbacks in advanced clinical trials or in seeking regulatory approvals, despite promising results in earlier trials. The FDA may also require additional clinical trials after regulatory approvals are received. Such additional trials may be expensive and time-consuming, and failure to successfully conduct those trials could jeopardize continued commercialization of a product.

The rates at which we complete our clinical trials depends on many factors, including, but are not limited to, our ability to obtain adequate supplies of the products to be tested and patient enrollment. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites and the eligibility criteria for the trial. Delays in patient enrollment for our trials may result in increased costs and longer development times. For example, the trial entitled "Eltrombopag To Reduce The Need For Platelet Transfusion In Subjects With Chronic Liver Disease And Thrombocytopenia Undergoing Elective Invasive Procedures (ELEVATE)" was suspended in October 2009 in accordance with an IDMC Recommendation. GSK terminated the ELEVATE study and has made the decision not to progress with this indication. In addition, our collaborative partners have rights to control product development and clinical programs for products developed under the 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.

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

Our strategy for developing and commercializing many of our potential products, including products aimed at larger markets, includes entering into collaborations with corporate partners and others. These collaborations have provided us with funding and research and development resources for potential products for the treatment of a variety of diseases. However, the funding provided to us by our existing collaborative partners for ongoing research and development under our existing collaborative agreements has ceased. These agreements also give our collaborative partners significant discretion when deciding whether or not to pursue any development program. Our existing collaborations may not continue or be successful, and we may be unable to enter into future collaborative arrangements to develop and commercialize our product candidates.

In addition, our collaborators may develop drugs, either alone or with others that compete with the types of drugs they are developing with us. This would result in increased competition for our programs. If products are approved for marketing under our collaborative programs, revenues we receive will depend on the manufacturing, marketing and sales efforts of our collaborative partners, who generally retain commercialization rights under the collaborative agreements. Generally, our current collaborative partners also have the right to terminate their collaborations 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, our product development under these agreements will be delayed or terminated. Disputes or litigation may also arise with our collaborators, including disputes or litigation over ownership rights to intellectual property, know-how or technologies developed with our collaborators. Such disputes or litigation could adversely affect our rights to one or more of our product candidates. Any such dispute or litigation could delay, interrupt or terminate the collaborative research, development and commercialization of certain potential products, create uncertainty as to ownership rights of intellectual property, or could result in litigation or arbitration. The occurrence of any of these problems could be time-consuming and expensive and could adversely affect our business.

We obtain CAPTISOL from a sole source supplier, and if this supplier were to cease to be able to supply CAPTISOL to us, or decline to supply CAPTISOL to us, we would be unable to continue to derive revenue or continue to develop our product candidates until we obtained an alternative source, which could take a considerable length of time.

We currently have one supplier of CAPTISOL, Hovione FarmaCiencia SA, or Hovione, through its agent Hovione LLC. Hovione is a major supplier of APIs and API intermediates located in Lisbon, Portugal. Hovione has other production sites in Cork, Ireland, Macau, China, and Zhejiang, China, but those sites are not yet fully qualified to make CAPTISOL. If a major disaster were to happen at Hovione or Hovione were to suffer major production problems or were to fail to deliver CAPTISOL to us for any other reason, there could be a significant interruption of our CAPTISOL supply. While we carry a significant inventory of CAPTISOL for this type of occurrence, which should permit us to satisfy our existing supply obligations through 2012 under current and anticipated demand conditions, an unusually large order or two could rapidly deplete that inventory and cause significant problems with our licensees and disrupt our business. In addition, if we fail to supply CAPTISOL under our supply agreements, our customers could obtain the right to have CAPTISOL manufactured by other suppliers, which would significantly harm our business.

We rely on contract manufacturers for the manufacture of CAPTISOL and product candidates, and if these contract manufacturers fail to perform as we expect, we will incur delays in our ability to generate revenue and substantial additional expenses in obtaining new contract manufacturers.

We do not manufacture products or product candidates, but rather contract with contract manufacturers for the manufacture of products and product candidates. With respect to any specific product or product candidate, we only contract with one contract manufacturer due to the high cost of compliance with good manufacturing practices prior to the contract manufacturer being permitted to manufacture the product or product candidate for use in humans. If a

contract manufacturer is unable or unwilling to continue to manufacture for us in the future, we would be required to contract with a new contract manufacturer for the specific product or product candidate. In the case of products, this would cause us to lose revenue during the qualification process, and in the case of product candidates, this could cause a delay in the commercialization of the product candidate. In addition, in either case we would incur substantial additional expenses as a result of the new contract manufacturer becoming qualified. Further, if a contract manufacturer were to experience a delay in producing products or product candidates due to a failure to meet strict FDA manufacturing requirements or otherwise, we would also experience a delay in development and commercialization of the product candidate or, in the case of products, sales of the product. This risk is exacerbated in the case of manufacture of injectables, which require heightened sterility and other conditions as well as specialized facilities for preparation.

If we consume cash more quickly than expected, and if we are unable to raise additional capital, we may be forced to curtail operations.

Our operations have consumed substantial amounts of cash since inception. As of March 31, 2012, we had a negative working capital of $3.7 million. Clinical and preclinical development of drug candidates is a long, expensive and uncertain process. Also, we may acquire companies, businesses or products and the consummation of such acquisitions may consume additional cash. For example, as part of the consideration for our recent acquisition of CyDex, we distributed approximately $12.0 million of our cash to CyDex stockholders. In connection with the acquisition, we entered into a $20 million Loan and Security Agreement, or the Loan Agreement, with a lender. Under the terms of the Loan Agreement, we will make interest only payments for one year at a fixed rate of 8.64%, with an option to extend the interest only payments for an additional year, which we intend to exercise. Subsequent to the interest only payments, the note will amortize with principal and interest payments due through the remaining term of the loan. The loan term, including interest only payments, is 42 months.

The Contingent Value Rights Agreement ("CVR Agreement") that was part of the CyDex acquisition obligated us to pay $4.3 million in January 2012 to the CyDex stockholders. In addition, in the event of a Default (as defined in the CVR Agreement), we would be obligated to deliver to an escrow agent the future cash payments called for under the CVR Agreement. There can be no assurances that in the event of a Default that we would be able to deliver the lump sum payment to the escrow agent.

In March 2011, we borrowed $5.0 million from Square 1 Bank and April 2011 we borrowed an additional $5.0 million from Square 1. All outstanding amounts under the loan bear interest at a floating rate equal to 200 basis points above the prime rate and may become immediately due and payable if we fail to maintain a cash balance at Square 1 equal to the amount outstanding under the credit facility. We paid $4.5 million on our revolving credit facility in January 2012 and another $4.0 million in March 2012. On March 29, 2012, we entered into a Second Amendment to Loan and Security Agreement (the "Square 1 Second Amendment to Loan and Security Agreement"). The Square 1 Second Amendment to Loan and Security Agreement changed the maturity date of the revolving line of credit facility to March 28, 2013. The Square 1 Second Amendment to Loan and Security Agreement did not change the interest rate and interest payment schedule established in the Loan and Security Agreement.

In October 2011, we filed a Registration Statement on Form S-3 with the Securities and Exchange Commission ("SEC") for the issuance and sale of up to $30 million of equity or other securities, proceeds from which will be used for general corporate purposes. The Form S-3 provides additional financial flexibility for the Company to sell shares as needed at any time. To date, no securities have been issued under this registration statement. In March 2012, we entered into a Controlled Equity Offering Sales Agreement with Cantor Fitzgerald & Co. ("Cantor"), as sales agent, to create an at-the-market equity program under which we may, from time to time, sell shares of common stock, par value $0.001 per share, up to an aggregate offering price of $30 million.

We believe that our capital resources, including our currently available cash, cash equivalents, and short-term investments as well as our current and future royalty revenues, will be adequate to fund our operations at their current levels at least for the next twelve months. However, changes may occur that would cause us to consume available capital resources before that time. Examples of relevant potential changes that could impact our capital resources include:

- the costs associated with our drug research and development activities, and additional costs we may incur if our development programs are delayed or are more expensive to implement than we currently anticipate;

- changes in collaborative relationships, including the funding we receive in connection with those relationships;
- the progress of our milestone and royalty producing activities;
- acquisitions of other businesses or technologies;
- the termination of our lease agreements;
- the costs of the closure of our operations at our Cranbury, New Jersey facility;
- the purchase of additional capital equipment;
- cash payments, including CVR payments, or refunds we may be required to make pursuant to certain agreements with third parties;
- competing technological and market developments; and
- the cost of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights, and the outcome of related litigation.

Additional capital may not be available on favorable terms, or at all. If additional capital is not available, we may be required to curtail operations significantly, including but not limited to reducing our current headcount, or to obtain funds by entering into arrangements with partners or other third parties that may require us to relinquish rights to certain of our technologies, products or potential markets that we would not otherwise relinquish.

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

If our collaborative partners terminate their collaborations with us or do not commit sufficient resources to the development, manufacture, marketing or distribution of our alliance products, we could be required to devote additional resources to our alliance products, seek new collaborative partners or abandon such alliance products, all of which could have an adverse effect on our business.

In September 2010, we received notice from GSK that it was exercising its right to terminate the Product Development and Commercialization Agreement, dated as of March 24, 2006 and as amended, among SmithKlineBeecham Corporation, doing business as GlaxoSmithKline, Glaxo Group Limited and Pharmacopeia, LLC, as successor to Pharmacopeia Drug Discovery, Inc. The termination became effective on October 7, 2010. Absent the termination by GSK, the research term under this agreement would have terminated on March 24, 2011. Following termination, we retained rights to the current programs under this agreement and may continue to develop the programs and commercialize any products resulting from the programs, or we may elect to cease progressing the programs and/or seek other partners for further development and commercialization.

In September 2011, we received a notice from MedImmune (a subsidiary of AstraZeneca) that it was exercising its right to terminate the Collaboration and License Agreement, dated April 19, 2001. Upon termination, all materials and know-how related to the IL-9 antibody program by MedImmune was returned to us. MedImmune is required to discuss the granting of a royalty-bearing license to intellectual property with respect to the product licensed under the agreement. However, MedImmune has no obligation to grant such a license or retain the ability to grant such a license. The termination became effective on November 30, 2011.

In October 2011, we received notice from Merck that it was exercising its right to terminate the Collaboration and License Agreement, dated November 24, 2003. The collaboration and licensing program was related to the physiology, pharmacology, chemistry, and potential therapeutic applications and potential clinical utilities related to Vanilloid Receptors, subtype 1, also known as TRPV1. Upon termination, Merck is required to transfer and/or disclose specified materials and know-how to us (which is under an obligation to transfer certain specified materials to Merck). In addition, we will receive an exclusive, perpetual, irrevocable, royalty-free (but subject to any third party royalty obligations), fully-paid, worldwide license, with right to sub-license, under specified patents and technology for the research, development or commercialization of specified compounds and products in a limited field of use. We will also receive a non-exclusive license to all other know-how Merck deems necessary to sell the specified compounds or products. The termination became effective on April 18, 2012.

We are currently dependent upon outlicensing business and we may not be successful in entering into additional out-license agreements on favorable terms, which may adversely affect our liquidity or require us to alter development plans on our products.

We have entered into several out-licensing agreements for the development and commercialization of our products. 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 their products using our CAPTISOL technology, fail to satisfy their obligations under their agreements with us, or otherwise 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. Further, under most of our CAPTISOL outlicenses, the amount of royalties we receive will be reduced or will cease when the relevant patent expires. While we have other more recent patents relating to CAPTISOL with later expiration dates (for example, our high purity patent, U.S. Patent No. 7,635,773 is not expected to expire until 2029 and our morphology patent, U.S. Patent No. 7,629,331 is not expected to expire until 2025), the initially filed patents relating to CAPTISOL expired in 2010 in the U.S. and are expected to expire between 2011 and 2016 in most countries outside the U.S. 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, the source of the vast majority of our CAPTISOL revenue may cease to exist.

Although we expend considerable resources on internal research and development for our proprietary programs, we may not be successful in entering into additional out-licensing agreements under favorable terms due to several factors including:

- the difficulty in creating valuable product candidates that target large market opportunities;
- research and spending priorities of potential licensing partners;
- willingness of and the resources available to pharmaceutical and biotechnology companies to in-license product candidates for their clinical pipelines; or
- differences of opinion with potential partners on the valuation of products we are seeking to out-license.

The inability to enter into out-licensing agreements under favorable terms and to earn milestone payments, license fees and/or upfront fees may adversely affect our liquidity and may force us to curtail or delay development of some or all of our proprietary programs, which in turn may harm our business and the value of our stock.

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

Our success will depend on our ability and the ability of our collaborative partners to avoid infringing the proprietary rights of others, both in the United States and in foreign countries. In addition, disputes with licensors under our license agreements may arise which could result in additional financial liability or loss of important technology and potential products and related revenue, if any. Further, the manufacture, use or sale of our potential products or our collaborative partners' products or potential products may infringe the patent rights of others. This could impact CAPTISOL, AVINZA, PROMACTA, VIVIANT and CONBRIZA (bazedoxifene), lasofoxifene, LGD-4665, and any other products or potential products.

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

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

Third parties have not directly threatened an action or claim against us, although we do periodically receive other communications or have other conversations with the owners of other patents or other intellectual property. If others obtain patents with conflicting claims, we may be required to obtain licenses to those patents or to develop or obtain alternative technology. We may not be able to obtain any such licenses on acceptable terms, or at all. Any failure to obtain such licenses could delay or prevent us from pursuing the development or commercialization of our potential products.

In general, litigation claims can be expensive and time consuming to bring or defend against and could result in settlements or damages that could significantly impact our results of operations and financial condition. We cannot predict or determine the outcome of these matters or reasonably estimate the amount or range of amounts of any fines or penalties that might result from a settlement or an adverse outcome. However, a settlement or an adverse outcome could have a material adverse effect on our financial position, liquidity and results of operations.

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

The initially filed patents relating to CAPTISOL expired in 2010 and 2011 in the U.S. and are expected to expire between 2012 and 2016 in most countries outside the U.S. We have also obtained patent protection in the U.S. through 2025 on Agglomerated form and through 2029 on High Purity form of CAPTISOL. We have obtained patent protection on a number of combinations of APIs and CAPTISOL through three combination patents in the U.S., and we have applied for six additional combination patents in the U.S. relating to the combination of CAPTISOL with specific APIs. Our U.S. combination patent relating to Fosphenytoin expires June 12, 2018 and our U.S. combination patent relating to Amiodarone expires May 4, 2022. Our U.S. combination patent relating to one of our early-stage product candidates expires March 19, 2022. There is no guarantee that these patents will be sufficient to prevent competitors from creating a generic form of CAPTISOL after 2010 and competing against us, or from developing combination patents for products that will prevent us from developing products using those APIs. In addition, most of the agreements in our CAPTISOL outlicensing business, including our agreements with Pfizer relating to Geodon IM, Vfend IV and Cerenia, provide that once the relevant patent expires, the amount of royalties we receive will be reduced or eliminated.

Generally, our success will depend on our ability and the ability of our licensors to obtain and maintain patents and proprietary rights for our potential products both in the United States and in foreign countries. Patents may not be issued from any of these applications currently on file, or, if issued, may not provide sufficient protection. Our patent position, like that of many biotechnology and pharmaceutical companies, is uncertain and involves complex legal and technical questions for which important legal principles are unresolved. We may not develop or obtain rights to products or processes that are patentable. Even if we do obtain patents, such patents may not adequately protect the technology we own or have licensed. In addition, others may challenge, seek to invalidate, infringe or circumvent any patents we own or license and rights we receive under those patents may not provide competitive advantages to us.

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

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

We also rely on unpatented trade secrets and know-how to protect and maintain our competitive position. We require our employees, consultants, collaborative partners and others to sign confidentiality agreements when they begin their relationship with us. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our competitors may independently discover our trade secrets.

Our product development involves a number of uncertainties, and we may never generate sufficient collaborative payments and royalties from the development of products to become profitable.

We were founded in 1987. We have incurred significant losses since our inception. As of March 31, 2012, our accumulated deficit was $680.4 million.

Most of our products in development will require extensive additional development, including preclinical testing and human studies, as well as regulatory approvals, before they can be marketed. We cannot predict if or when any of the products we are developing or those being developed with our partners will be approved for marketing. There are many reasons why we or our collaborative partners may fail in our efforts to develop our potential products, including the possibility that: preclinical testing or human studies may show that our potential products are ineffective or cause harmful side effects; the products may fail to receive necessary regulatory approvals from the FDA or foreign authorities in a timely manner, or at all; the products, if approved, may not be produced in commercial quantities or at reasonable costs; the products, if approved, may not achieve commercial acceptance; regulatory or governmental authorities may apply restrictions to our products, which could adversely affect their commercial success; or the proprietary rights of other parties may prevent us or our partners from marketing the products.

Any product development failures for these or other reasons, whether with our products or our partners' products, may reduce our expected revenues, profits, and stock price.

We may not be able to hire and/or retain key employees.

If we are unable to hire and/or retain key employees, we may not have sufficient resources to successfully manage our assets or our business, and we may not be able to perform our obligations under various contracts and commitments. Furthermore, there can be no assurance that we will be able to retain all of our key management and scientific personnel. If we fail to retain such key employees, we may not realize the anticipated benefits of our mergers. Either of these could have substantial negative impacts on our business and our stock price.

If plaintiffs bring product liability lawsuits against us or our partners, we or our partners may incur substantial liabilities and may be required to limit commercialization of our approved products and product candidates, and we may be subject to other liabilities related to the sale of our prior commercial product lines.

We and our partners 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 $5.0 million annual limit. We intend to expand product liability insurance coverage to include the sale of commercial products if we obtain marketing approval for any products that we may develop. However, this insurance may be prohibitively expensive, or may not fully cover our potential liabilities. Inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or delay the commercialization of our product candidates. If we are sued for any injury caused by our product candidates or any future products, our liability could exceed our total assets.

In addition, we agreed to indemnify Eisai and King under certain circumstances pursuant to the asset purchase agreements we entered into with Eisai and King in connection with the sale of our prior commercial product lines. Some of our indemnification obligations still remain and our potential liability in certain circumstances is not limited to specific dollar amounts. We cannot predict the liabilities that may arise as a result of these matters. Any claims related to our indemnification obligations to King or Eisai could materially and adversely affect our financial condition.

In addition, King assumed our obligation to make payments to Organon based on net sales of AVINZA (the fair value of which was $20.1 million as of March 31, 2012). We remain liable to Organon in the event King defaults on this obligation. Any requirement to pay a material amount to Organon, could adversely affect our business and the price of our securities.

The sale of our prior commercial product lines does not relieve us of exposure to product liability risks on products we sold prior to divesting these product lines. A successful product liability claim or series of claims brought against us may not be insured and could result in payment of significant amounts of money and divert management's attention from running our business.

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

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

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

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

Our shareholder rights plan 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 preferred stock without any further action by the stockholders. Such restrictions and issuances may have the effect of delaying or preventing a change in our ownership. If changes in our ownership are discouraged, delayed or prevented, it would be more difficult for our current Board of Directors to be removed and replaced, even if you or our other stockholders believe that such actions are in the best interests of us and our stockholders.

We may lose some or all of the value of some of our short-term investments.

We engage one or more third parties to manage some of our cash consistent with an investment policy that allows a range of investments and maturities. The investments are intended to maintain safety of principal while providing liquidity adequate to meet projected cash requirements. Risks of principal loss are to be minimized through diversified short and medium term investments of high quality, but the investments are not in every case guaranteed or fully insured. As a result of changes in the credit market, one of our short-term investments in commercial paper was in default. As a result, we were unable to recoup all of our investment in the commercial paper. In addition, from time to time we may suffer other losses on our short-term investment portfolio.

We may require additional funds to run our business and may be required to raise these funds on terms which are not favorable to us or which reduce our stock price.

We may need to complete additional equity or debt financings to fund our operations. Our inability to obtain additional financing could adversely affect our business. Financings may not be available at all or on terms favorable to us. In addition, these financings, if completed, may not meet our capital needs and could result in substantial dilution to our stockholders.

In October 2011, we filed a Registration Statement on Form S-3 with the Securities and Exchange Commission ("SEC") for the issuance and sale of up to $30 million of equity or other securities, proceeds from which will be used for general corporate purposes. The Form S-3 provides additional financial flexibility for the Company to sell shares as needed at any time. To date, no securities have been issued under this registration statement.

If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate one or more of our research or drug development programs. We may also be required to liquidate our business or file for bankruptcy protection. Alternatively, we may be forced to attempt to continue development by entering into arrangements with collaborative partners or others that require us to relinquish some or all of our rights to technologies or drug candidates that we would not otherwise relinquish.

Our drug development programs will require substantial additional future funding which could hurt our operational and financial condition.

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

Our future operating and capital needs will depend on many factors, including: the pace of scientific progress in our research and development programs and the magnitude of these programs; the scope and results of preclinical testing and human studies; the time and costs involved in obtaining regulatory approvals; the time and costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims; competing technological and market developments; our ability to establish additional collaborations; changes in our existing collaborations; the cost of manufacturing scale-up; and the effectiveness of our commercialization activities.

We expect our research and development expenditures over the next three years to continue to be significant. However, we base our outlook regarding the need for funds on many uncertain variables. Such uncertainties include regulatory approvals, the timing of events outside our direct control such as product launches by partners and the success of such product launches, negotiations with potential strategic partners, possible sale of assets or other transactions and other factors. Any of these uncertain events can significantly change our cash requirements.

While we expect to fund our research and development activities from cash generated from royalties and royalties and milestones from our partners in various past and future collaborations to the extent possible, if we are unable to do so, we may need to complete additional equity or debt financings or seek other external means of

financing. These financings could depress our stock price. If additional funds are required to support our operations and we are unable to obtain them on terms favorable to us, we may be required to cease or reduce further development or commercialization of our products, to sell some or all of our technology or assets or to merge with another entity.

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

Our results of operations could be materially negatively affected by economic conditions generally, both in the U.S. and elsewhere around the world. Continuing concerns over inflation, energy costs, geopolitical issues, the availability and cost of credit, the U.S. mortgage market and a declining residential real estate market in the U.S. have contributed to increased volatility and diminished expectations for the economy and the markets going forward. These factors, combined with volatile oil prices, declining business and consumer confidence and increased unemployment, have precipitated an economic recession and fears of a possible depression. Domestic and international equity markets continue to experience heightened volatility and turmoil. These events and the continuing market upheavals may have an adverse effect on us. In the event of a continuing 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.

Our investment securities consist primarily of money market funds, corporate debt obligations and U.S. government agency securities. We do not have any auction rate securities. Recently, there has been concern in the credit markets regarding the value of a variety of mortgage-backed securities and the resultant effects on various securities markets. We cannot provide assurance that our investments are not subject to adverse changes in market value. If our investments experience adverse changes in market value, we may have less capital to fund our operations.

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

Our common stock has experienced significant price and volume fluctuations and may continue to experience volatility in the future. As a result, you may not be able to sell your shares quickly or at the latest market price if trading in our stock is not active or the volume is low. In November 2010, we effected a 1-for-6 reverse stock split. We believe the reverse stock split will have the effect of increasing the per share trading price of our common stock. 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 limited daily trading volume.

The Financial Industry Regulatory Authority, or FINRA, (formerly the National Association of Securities Dealers, Inc.) and the Securities and Exchange Commission, or SEC, have adopted certain new rules. If we were unable to continue to comply with the new rules, we could be delisted from trading on the NASDAQ Global Market, or Nasdaq, and thereafter trading in our common stock, if any, would be conducted through the over-the-counter market or on the Electronic Bulletin Board of FINRA. As a consequence of such delisting, an investor would likely find it more difficult to dispose of, or to obtain quotations as to the price of, our common stock. Delisting of our common stock could also result in lower prices per share of our common stock than would otherwise prevail.

Any future material weaknesses or deficiencies in our internal control over financial reporting could harm stockholder and business confidence on our financial reporting, our ability to obtain financing and other aspects of our business.

As described in Item 4, we identified a material weakness as a result of improper accounting for significant non-routine transactions. Management has determined that the material weakness was a result of inadequate staffing. Since the transaction date which resulted in this material weakness, we have added a corporate controller to our finance and accounting staff. While we had processes to identify and apply accounting standards to complex transactions, we enhanced these processes with the addition of a resource with the ability to research and understand the nuances of complex accounting standards. Given this material weakness, management determined that we did not maintain effective internal control over financial reporting. The existence of one or more material weakness or significant deficiency could result in future errors in our consolidated financial statements. Substantial costs and resources may be required to rectify any internal control deficiencies. If we fail to achieve and 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.

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

We may undertake strategic acquisitions in the future and any difficulties from integrating such acquisitions could adversely affect our stock price, operating results and results of operations.

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

As part of our efforts to acquire companies, business or product candidates or to enter into other significant transactions, we conduct business, legal and financial due diligence with the goal of identifying and evaluating material risks involved in the transaction. Despite our efforts, we ultimately may be unsuccessful in ascertaining or evaluating all such risks and, as a result, might not realize the intended advantages of the transaction. If we fail to realize the expected benefits from acquisitions we may consummate in the future, whether as a result of unidentified risks, integration difficulties, regulatory setbacks 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.

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. 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.

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

Not applicable.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not appicable

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

The Index to Exhibits on page 47 is incorporated herein by reference as the list of exhibits required as part of this Quarterly Report.

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LIGAND PHARMACEUTICALS INCORPORATED

SIGNATURE

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

Date: May 4, 2012

By: /s/ John P. Sharp
John P. Sharp
Vice President, Finance and Chief Financial Officer

INDEX TO EXHIBITS

Exhibit Number	Description
2.1(1)	Agreement and Plan of Merger, by and among the Company, Pharmacopeia, Inc., Margaux Acquisition Corp. and Latour Acquisition, LLC, dated as of September 24, 2008 (Filed as Exhibit 2.1).
2.2(2)	Agreement and Plan of Merger, by and among the Company, Neurogen Corporation and Neon Signal, LLC, dated as of August 23, 2009 (Filed as Exhibit 10.1).
2.3(3)	Amendment to Agreement and Plan of Merger, by and among the Company, Neurogen Corporation, and Neon Signal, LLC, dated September 18, 2009 (Filed as Exhibit 10.1).
2.4(3)	Amendment No. 2 to Agreement and Plan of Merger, by and among the Company, Neurogen Corporation, and Neon Signal, LLC, dated November 2, 2009 (Filed as Exhibit 10.2).
2.5(4)	Amendment No. 3 to Agreement and Plan of Merger, by and among the Company, Neurogen Corporation, and Neon Signal, LLC, dated December 17, 2009 (Filed as Exhibit 10.1).
2.6(5)	Certificate of Merger for acquisition of Neurogen Corporation (Filed as Exhibit 2.1).
2.7(6)	Agreement and Plan of Merger, dated as of October 26, 2009, by and among the Company, Metabasis Therapeutics, Inc., and Moonstone Acquisition, Inc (Filed as Exhibit 10.1).
2.8(7)	Amendment to Agreement and Plan of Merger, by and among the Company, Metabasis Therapeutics, Inc., Moonstone Acquisition, Inc., and David F. Hale as Stockholders' Representative, dated November 25, 2009 (Filed as Exhibit 10.1).
2.9(8)	Certificate of Merger for acquisition of Metabasis Therapeutics, Inc. dated January 27, 2010 (Filed as Exhibit 2.1).
2.10(9)	Certificate of Merger, dated and filed January 24, 2011 (Filed as Exhibit 2.1).
2.11(9)	Agreement and Plan of Merger, by and among the Company, CyDex Pharmaceuticals, Inc., and Caymus Acquisition, Inc., dated January 14, 2011 (Filed as Exhibit 10.1).
3.1(10)	Amended and Restated Certificate of Incorporation of the Company (Filed as Exhibit 3.1).
3.2(10)	Bylaws of the Company, as amended (Filed as Exhibit 3.3).
3.3(11)	Amended Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Company (Filed as Exhibit 3.3).
3.4(12)	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated June 14, 2000 (Filed as Exhibit 3.5).
3.5(13)	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated September 30, 2004 (Filed as Exhibit 3.6).
3.6(14)	Amendment of the Bylaws of the Company dated November 8, 2005 (Filed as Exhibit 3.1).
3.7(15)	Amendment of Bylaws of the Company dated December 4, 2007 (Filed as Exhibit 3.1).
4.1(16)	Specimen stock certificate for shares of Common Stock of the Company.
4.4(17)	2006 Preferred Shares Rights Agreement, by and between the Company and Mellon Investor Services LLC, dated as of October 13, 2006 (Filed as Exhibit 4.1).
10.1†	Sublicense Agreement between the Company, Pharmacopeia, Inc. and Retrophin LLC dated as of February 16, 2012.
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.

Exhibit Number	Description
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*	Certification by Principal Executive Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification by Principal Financial Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.1**	The following financial information from the Company's Quarterly Report on Form 10-Q, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets, (ii) Condensed Consolidated Statements of Operations, (iii) Condensed Consolidated Statements of Comprehensive Income, (iv) Condensed Consolidated Statements of Cash Flows, and (v) the Notes to Condensed Consolidated Financial Statements, tagged as blocks of text.

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

(1) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on September 26, 2008.

(2) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on August 24, 2009.

(3) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on November 6, 2009

(4) This exhibit was previously filed as part of, and is being incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on December 17, 2009.

(5) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on December 24, 2009.

(6) This exhibit was previously filed as part of, and is being incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on October 28, 2009.

(7) This exhibit was previously filed as part of, and is being incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on December 1, 2009.

(8) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on January 28, 2010.

(9) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on January 26, 2011.

(10) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Registration Statement on Form S-4 (No. 333-58823) filed on July 9, 1998.

(11) This exhibit was previously filed as part of and is hereby incorporated by reference to same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 1999.

(12) This exhibit was previously filed as part of, and are hereby incorporated by reference to the numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2000.

(13) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2004.

(14) This exhibit was previously filed as part of, and is being incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on November 14, 2005.

(15) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on December 6, 2007.

(16) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Registration Statement on Form S-1 (No. 33-47257) filed on April 16, 1992 as amended.

(17) This exhibit was previously filed as part of, and is being incorporated by reference to the numbered exhibit filed with the Company's Current Report on Form 8-K filed on October 17, 2006.

* These certifications are being furnished solely to accompany this quarterly report pursuant to 18 U.S.C. Section 1350, and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and are not to be incorporated by reference into any filing of Ligand Pharmaceuticals, Incorporated, whether made before or after the date hereof, regardless of any general incorporation language in such filing. Signed originals of these certifications have been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

** Pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under these sections.

Exhibit 10.1

CERTAIN MATERIAL (INDICATED BY ASTERISKS) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

SUBLICENSE AGREEMENT

THIS SUBLICENSE AGREEMENT (the "Agreement") is made and entered into effective as of February 16, 2012 (the "Effective Date") by and between Ligand Pharmaceuticals Incorporated, a corporation organized under the laws of Delaware and having a place of business at 11085 North Torrey Pines Road, Suite 300, La Jolla, CA, 92037 and its wholly owned subsidiary, Pharmacopeia, Inc. (as successor in interest to Pharmacopeia Drug Discovery Inc.) ("PCOP"), a limited liability company organized under the laws of Delaware and having a place of business at 11085 North Torrey Pines Road, Suite 300, La Jolla, CA, 92037 (collectively, Ligand Pharmaceuticals Incorporated and PCOP shall be known as "Ligand") and Retrophin, LLC, a limited liability company organized under the laws of Delaware and having a place of business at 330 Madison Avenue, 6th Floor, New York, NY, 10017 ("Retrophin"). Ligand and Retrophin are each referred to herein by name or individually as a "Party" or collectively as the "Parties."

RECITALS

WHEREAS, Ligand has in-licensed certain patent rights and know-how rights with respect to the Licensed Compounds (as defined below) and has the right to sublicense the same;

WHEREAS, Retrophin desires to obtain from Ligand sublicenses relating to the Licensed Compounds and Ligand desires to grant such sublicenses to Retrophin, all on the terms and conditions set forth in this Agreement;

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and agreements set forth below, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1.
DEFINITIONS

The terms in this Agreement with initial letters capitalized shall have the meaning set forth below or, if not listed below, the meaning designated in places throughout this Agreement.

1.1 "AAA" has the meaning set forth in Section 14.3.1.

1.2 "Act" means the United States Food, Drug and Cosmetic Act, as amended.

1.3 "Active Compound" has the meaning set forth in Appendix 2 hereto.

1.4 "Affiliate" of a Person means any other Person which (directly or indirectly) is controlled by, controls or is under common control with such Person. For the purposes of this definition, the term "control" (including, with correlative meanings, the terms "controlled by" and "under common control with") as used with respect to a Person means (i) in the case of a corporate entity, direct or indirect ownership of voting securities entitled to cast at least **[***]*** of the votes in the election of directors or (ii) in the case of a non-corporate entity, direct or indirect ownership of at least **[***]** of the voting securities with the power to direct the management and policies of such entity.

1.5 "Agreement" has the meaning set forth in the initial paragraph herein and includes all Appendices attached hereto, as the same may be amended or supplemented from time to time.

1.6 "Approval" means, with respect to any Licensed Product in any regulatory jurisdiction, approval from the applicable Regulatory Authority sufficient for the manufacture, distribution, use and sale of the Licensed Product in such jurisdiction in accordance with applicable Laws.

1.7 "BMS" means Bristol-Myers Squibb Company, a Delaware corporation headquartered at 345 Park Avenue, New York, New York 10154.

1.8 "BMS Know-How" means **[***]**. BMS Know-How shall not include **[***]**.

1.9 "Business Day" or "business day" means a day other than Saturday, Sunday or any day on which commercial banks located in New York, New York are authorized or obligated by applicable Laws to close.

1.10 **[***]**.

1.11 **[***]**.

1.12 "Combination Product" means **[***]**.

1.13 "Commercialization" or "Commercialize" means activities directed to commercially manufacturing, obtaining pricing and reimbursement approvals, carrying out Phase 4 Trials for, marketing, promoting, distributing, importing or selling a pharmaceutical product.

1.14 "Commercially Reasonable Efforts" means, with respect to Licensed Compounds and Licensed Products, the carrying out of Development or Commercialization activities in a **[***]**. Without limiting the foregoing, Commercially Reasonable Efforts requires that a Party: (i) **[***]** (ii) **[***]** (iii) **[***]** (iv) **[***]** (v) **[***]**.

1.15 "Competitive Compound" means any **[***]** that is **[***]** unless Ligand has**[***]**. Ligand shall not **[***]**.

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

1.16 "Confidential Information" means all trade secrets, processes, formulae, data, know-how, improvements, inventions, chemical or biological materials, assays, techniques, marketing plans, strategies, customer lists, or other information that has been created, discovered, or developed by a Party, or has otherwise become known to a Party, or to which rights have been assigned to a Party, as well as any other information, agreements and materials that are deemed confidential or proprietary to or by a Party (including all information and materials of a Party's customers and any other Third Party and their consultants), in each case that are disclosed by such Party to the other Party, regardless of whether any of the foregoing are marked "confidential" or "proprietary" or communicated to the other by the disclosing Party in oral, written, graphic, or electronic form.

1.17 "Controlled" or "Controls", when used in reference to intellectual property, means the legal authority or right of a Party hereto (or any of its Affiliates) to grant a license or sublicense of intellectual property rights to another Party, or to otherwise disclose proprietary or trade secret information to such other Party, without breaching the terms of any agreement with a Third Party, or misappropriating the proprietary or trade secret information of a Third Party.

1.18 "Core Patent Rights" means the patents and patent applications that are listed in Appendix 1 hereto and (a) **[***]*** that **[***]** listed in Appendix 1 hereto **[***]** and **[***]** (but in each case, only with respect to **[***]** listed in Appendix 1 hereto), (b) all **[***]** foregoing**[***]**, together with all **[***]** thereof (but in each case, only with respect to **[***]** in Appendix 1 hereto).

1.19 "Cover," "Covered" or "Covering" means, with respect to patent rights, that the making, using, importation, offer for sale or sale of an invention claimed in such patent rights or the conducting of an activity that, in the absence of a license under such patent rights, would infringe at least one Valid Claim of such patent rights whether present in an issued patent or in a patent application if it issued as a patent containing such claim.

1.20 "Development" means non-clinical and clinical drug development activities reasonably related to the development and submission of information to a Regulatory Authority, including toxicology, pharmacology and other discovery and pre-clinical efforts, test method development and stability testing, manufacturing process development, formulation development, delivery system development, quality assurance and quality control development, statistical analysis, clinical studies (including, pre- and post-approval studies and specifically excluding regulatory activities directed to obtaining pricing and reimbursement approvals). When used as a verb, "Develop" means to engage in Development.

1.21 "Development Plan" means, with respect to any Licensed Product, a comprehensive, multi-year plan specifying the anticipated timing and technical details of Development activities for such Licensed Product, including the indications to be targeted, line of therapy, timelines for completing key activities, phasing of development, primary endpoints,

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

criteria for continuing activities, study size, comparator drugs, combination drugs, timelines for data preparation and filing of regulatory submissions, toxicology and pharmacology studies and manufacturing process development and scale up. An outline of the initial Development Plan as of the Effective Date is attached hereto as Appendix 3.

1.22 "Dollar" or "$" means the lawful currency of the United States.

1.23 "Effective Date" has the meaning set forth in the initial paragraph of this Agreement.

1.24 "EMEA" means the European Agency for the Evaluation of Medicinal Products, or any successor agency thereto.

1.25 "Excluded Claim" means a Dispute that concerns (a) the validity or infringement of a patent, trademark or copyright or (b) any antitrust, anti-monopoly or competition law or regulation, whether or not statutory.

1.26 "Executive" means for Ligand, the Chief Executive Officer of Ligand (or such individual's designee) and for Retrophin, the Chief Executive Officer of Retrophin (or such individual's designee). If either position is vacant or either position does not exist, then the person having the most nearly equivalent position (or such individual's designee) shall be deemed to be the Executive of the relevant Party.

1.27 "Exit Transaction" means: (i) **[***]*****

1.28 "FDA" means the U.S. Food and Drug Administration, or any successor agency thereto.

1.29 "Field" means the diagnosis, prevention, treatment or control of any human or animal disease, disorder or condition.

1.30 "First Commercial Sale" means, with respect to any Licensed Product, the first sale for use or consumption by the general public of such Licensed Product in any country in the Territory after Approval of such Licensed Product has been granted, or such marketing and sale is otherwise permitted, by the Regulatory Authority of such country.

1.31 "GAAP" means generally accepted accounting principles in the United States.

1.32 "IND" means an Investigational New Drug Application, as defined in the Act, filed with the FDA or its foreign counterparts.

1.33 "Indemnification Claim" has the meaning set forth in Section 12.3.

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

1.34 "Indemnitee" has the meaning set forth in Section 12.3.

1.35 "Indemnitor" has the meaning set forth in Section 12.3.

1.36 "JNDA" means a New Drug Application filed with the Koseisho required for marketing approval for the applicable Licensed Product in Japan.

1.37 "JNDA Approval" means the approval of a JNDA by the Koseisho for the applicable Licensed Product in Japan.

1.38 "JNDA Filing" means the submission to the Koseisho of a JNDA for the applicable Licensed Product in Japan.

1.39 "Know-How" means **[***]***.**

1.40 "Koseisho" means the Japanese Ministry of Health and Welfare, or any successor agency thereto.

1.41 "Laws" means all laws, statutes, rules, regulations, ordinances and other pronouncements having the effect of law of any federal, national, multinational, state, provincial, county, city or other political subdivision, agency or other body, domestic or foreign.

1.42 "License" means any agreement transferring rights with respect to any Licensed Compound or any Licensed Product by Retrophin (or an Affiliate of Retrophin) to any Third Party licensee, including any license, sublicense, co-development, co-promotion, distribution, joint venture, development and commercialization collaboration or similar transaction involving a transfer of rights with respect to a Licensed Compound or Licensed Product. "License" shall also include any further transfer of such rights by a Third Party licensee to any other Third Party. "License" also refers to the corresponding arrangement for the grant by Retrophin of rights back to BMS and Ligand with respect to one or more Licensed Compound(s) and Licensed Product(s) pursuant to Article 3.

1.43 "Licensed Compounds" means:

(a) the **[***]**;

(b) any **[***]**;

(c) any **[***]**; and

(d) any **[***]**.

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

1.44 "Licensed Product" means any pharmaceutical product containing a Licensed Compound (alone or with other active ingredients), in all forms, presentations, formulations and dosage forms.

1.45 "Listed Compounds" means those compounds identified in Appendix 4.

1.46 "Losses and Claims" has the meaning set forth in Section 12.1.

1.47 "MAA Approval" means approval by the EMEA of a marketing authorization application ("MAA") filed with the EMEA for the applicable Licensed Product under the centralized European procedure. If the centralized EMEA filing procedure is not used, MAA Approval shall be achieved upon the first Approval for the applicable Licensed Product in any two of the following countries: France, Germany, Italy, Spain or the United Kingdom.

1.48 "MAA Filing" means the submission to the EMEA of a MAA for the applicable Licensed Product under the centralized European procedure. If the centralized EMEA filing procedure is not used, MAA Filing shall be achieved upon the first filing of a marketing authorization application for the applicable Licensed Product in any two of the following countries: France, Germany, Italy, Spain or the United Kingdom.

1.49 "Major Market Countries" means the**[***]*****. "Major Market Country" **[***]**.

1.50 "NDA" means a New Drug Application filed with the FDA required for marketing approval for the applicable Licensed Product in the U.S.

1.51 "NDA Approval" means the approval of a NDA by the FDA for the applicable Licensed Product in the U.S.

1.52 "NDA Filing" means the submission to the FDA of a NDA for the applicable Licensed Product.

1.53 "Net Sales" means, with respect to any **[***]**:

(a) **[***]**; *provided, however*, that where any such **[***]**;

(b) **[***]**;

(c) **[***]**; and

(d) **[***]**.

Net Sales shall be determined **[***]**. In the case of any Combination Product sold in the Territory, Net Sales for such Combination Product shall be calculated by **[***]**.

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Net Sales shall not include any **[***]**.

1.54 "Orphan Licensed Product" means a Licensed Product that receives orphan drug designation from the FDA pursuant to 21 C.F.R. Part 316, or from a Regulatory Authority pursuant to a comparable rule or regulation in a foreign jurisdiction, including the orphan indications set forth in the Development Plan.

1.55 "Other Patent Rights" means (i) **[***]*** (a) **[***]** or (b) **[***]** and (ii) **[***]**.

1.56 "Patent Rights" means the Core Patent Rights and the Other Patent Rights.

1.57 "Person" means any individual, firm, corporation, partnership, limited liability company, trust, business trust, joint venture company, governmental authority, association or other entity.

1.58 "Phase 2 Trial" means a human clinical trial of a Licensed Product, the principal purpose of which is a determination of safety and efficacy in the target patient population, as described in 21 C.F.R. 312.21(b), or a similar clinical study prescribed by the Regulatory Authorities in a foreign country. For purposes of this Agreement, "initiation of a Phase 2 Trial" for a Licensed Product means the first dosing of such Licensed Product in a human patient in a Phase 2 Trial.

1.59 "Phase 3 Trial" means a human clinical trial of a Licensed Product on a sufficient number of subjects that is designed to establish that a pharmaceutical product is safe and efficacious for its intended use, and to determine warnings, precautions, and adverse reactions that are associated with such pharmaceutical product in the dosage range to be prescribed, which trial is intended to support Approval of a Licensed Product, as described in 21 C.F.R. 312.21(c), or a similar clinical study prescribed by the Regulatory Authorities in a foreign country. For clarity, any human clinical trial may qualify as a Phase 3 Trial if it supports Approval of a Licensed Product without the need to conduct a Phase 3 Trial. For purposes of this Agreement, "initiation of a Phase 3 Trial" for a Licensed Product means the first dosing of such Licensed Product in a human patient in a Phase 3 Trial.

1.60 "Phase 4 Trial" means a human clinical trial for a Licensed Product commenced after receipt of Approval in the country for which such trial is being conducted and that is conducted within the parameters of the Approval for the Licensed Product. Phase 4 Trials may include epidemiological studies, modeling and pharmacoeconomic studies, investigator sponsored clinical trials of the Licensed Product and post-marketing surveillance studies.

1.61 "Proprietary Compound of BMS or Ligand" means any compound or other agent being developed or sold, (a) as of the March 27, 2006 or at any time thereafter, by BMS or its Affiliates, or their contractors or collaborators, or (b) as of the Effective Date or any time thereafter, by Ligand or its Affiliates, or their contractors or collaborators.

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1.62 "Regulatory Authority" means any national or supranational governmental authority, including the FDA, EMEA or Koseisho (i.e., the Japanese Ministry of Health and Welfare, or any successor agency thereto), that has responsibility in countries in the Territory over the Development and/or Commercialization of Licensed Compounds and Licensed Products.

1.63 "Sublicensee" means any Third Party to whom rights are transferred with respect to any Licensed Compound or Licensed Product, including through any license, sublicense, co-development, co-discovery, co-promotion, distribution, joint venture, Development and Commercialization collaboration or similar transaction between a Party (or an Affiliate of a Party) and a Third Party. "Sublicensee" shall also include any Third Party to whom such rights are transferred through further sublicense by a Sublicensee. "Sublicensee" shall include any Third Party that is a party to a License agreement.

1.64 "Territory" means any country in the world.

1.65 "Third Party" means any Person other than Retrophin, Ligand and their respective Affiliates.

1.66 "Title 11" has the meaning set forth in Section 13.7.

1.67 "United States" or "U.S." means the United States of America and its territories and possessions (including Puerto Rico).

1.68 **[***]***.

1.69 "Valid Claim" means a claim of (i) an issued and unexpired patent or a supplementary protection certificate, which claim has not been held invalid or unenforceable by a court or other government agency of competent jurisdiction from which no appeal can be or has been taken and has not been held or admitted to be invalid or unenforceable through re-examination or disclaimer, opposition procedure, nullity suit or otherwise or (ii) a pending patent application; *provided*, *however*, that if a claim of a pending patent application shall not have issued within **[***]*** Certain information on this page has been omitted and filed separately with the Commission. Confidential treatment has been requested with respect to the omitted portions.** after the earliest filing date from which such claim takes priority, such claim shall not constitute a Valid Claim for the purposes of this Agreement unless and until a patent issues with such claim.

ARTICLE 2.
LICENSE GRANTS

2.1 Patent Rights and Know-How.

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2.1.1 Core Patent Rights and Know-How. Subject to the terms and conditions set forth in this Agreement (including the reservation of rights in Section 2.5), Ligand hereby grants to Retrophin a non-transferable (except in accordance with Section 15.4), exclusive sublicense, with the right to further sublicense in accordance with Section 2.2, under the Core Patent Rights and Know-How solely to the extent reasonably necessary to, make, use (including in activities directed at the research and Development of Licensed Compounds), have made, sell, have sold, offer to sell, export, import and otherwise exploit or Commercialize Licensed Compounds and Licensed Products in the Field in the Territory.

2.1.2 Other Patent Rights. Subject to the terms and conditions set forth in this Agreement (including the reservation of rights in Section 2.5), Ligand hereby grants to Retrophin a non-transferable (except in accordance with Section 15.4), non-exclusive sublicense, with the right to further sublicense in accordance with Section 2.2, under the Other Patent Rights solely to the extent reasonably necessary or useful to make, use (including in activities directed at the research and Development of Licensed Compounds), have made, sell, offer to sell, export and import and otherwise exploit or Commercialize Licensed Compounds and Licensed Products in the Field in the Territory, *provided, however,* that no rights are granted under this Section 2.1.2 (or otherwise under this Agreement) with respect to any Proprietary Compound of BMS or Ligand. For clarification, no rights are granted under this Section 2.1.2 (or otherwise under this Agreement) to co-formulate or use in combination a Licensed Compound with any Proprietary Compound of BMS or Ligand. The rights granted by Ligand to Retrophin under this Section 2.1.2 include the right to make, have made, use (including in activities directed at the research and Development of Licensed Compounds), export and import intermediates and starting materials reasonably necessary for the manufacture of Licensed Compounds, and to practice methods reasonably necessary for the manufacture of Licensed Compounds, and to practice methods reasonably necessary for manufacturing such intermediates and starting materials, but only for the purposes of manufacturing, using, importing or exporting Licensed Compounds in the Field in the Territory. For clarification, no rights are granted to sell or offer to sell any such intermediates or starting materials, or use such intermediates or starting materials for any purpose other than for the purposes of manufacturing Licensed Compounds.

2.2 Sublicenses.

2.2.1 Retrophin shall have the right to grant sublicenses with respect to the rights licensed to Retrophin under Sections 2.1.1 and 2.1.2 to any Affiliate of Retrophin for so long as such Affiliate remains an Affiliate of Retrophin; *provided, however,* that (i) such Affiliate shall agree in writing to be bound by and subject to the terms and conditions of this Agreement in the same manner and to the same extent as Retrophin and (ii) Retrophin shall remain responsible for the performance of this Agreement and shall cause such Affiliate to comply with the terms and conditions of this Agreement. In addition, Retrophin shall have the right to grant sublicenses with respect to the rights licensed to Retrophin under Sections 2.1.1 and 2.1.2 to Third Parties.

2.2.2 Retrophin shall have the right to enter into a License agreement with a Third Party; *provided, however,* to the extent any such License agreement grants rights with respect to any Licensed Compound:

(i) such License agreement shall be consistent with the terms and conditions of this Agreement, and shall not limit (A) Retrophin's ability to perform its obligations under this Agreement, (B) Ligand's rights under this Agreement, (C) **[***]** or (D) **[***]***.**

(ii) in such License agreement, the Sublicensee shall agree in writing to be bound to Retrophin by terms and conditions that are substantially similar to, or less favorable to the Sublicensee than, or otherwise allow Retrophin to fully perform the corresponding terms and conditions of this Agreement;

(iii) such License agreement shall comply with Section 8.10.2 hereof regarding minimum royalty payments;

(iv) promptly after the execution of such License agreement, Retrophin shall provide a copy of such License agreement to Ligand, with financial and other confidential or proprietary commercial terms redacted consistent with the public filing of such license agreement with the Securities and Exchange Commission ("SEC"), or, if not filed with the SEC, then with financial and other confidential or proprietary commercial terms redacted (to the extent that such other commercial terms are not reasonably necessary for Ligand to determine Retrophin's compliance with this Agreement). **[***]**;

(v) Retrophin shall remain responsible for the performance of this Agreement (including its obligations under Sections 5.1.1 and 6.1), the payment of all payments due, making reports and keeping books and records and shall use commercially reasonable efforts to monitor such Sublicensee's compliance with the terms of such License;

(vi) any sublicense rights granted by Retrophin in a License (to the extent such sublicensed rights are granted to Retrophin in this Agreement) shall terminate on a country-by-country and Licensed Product-by-Licensed Product basis effective upon (i) the termination under Section 13.2 of the license from Ligand to Retrophin with respect to such sublicensed rights or (ii) the termination under Section 13.2 of the license from BMS to Ligand with respect to such sublicensed rights; *provided, however,* that such sublicensed rights shall not terminate if, as of the effective date of such termination by Ligand under Section 13.2 of this Agreement or BMS under Section 13.2 of the Upstream License Agreement, the Sublicensee is not in material breach of its obligations to Retrophin under its License agreement, and within **[***]** days of such termination the Sublicensee agrees in writing to be bound directly to BMS or Ligand, as the case may be, under a license agreement substantially similar to this Agreement **[***]**, as the case may be, with respect to the rights sublicensed hereunder, substituting such Sublicensee for Retrophin or Ligand, as the case may be; and

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(vii) such Sublicensees shall have the right to grant further sublicenses with respect to the Development or Commercialization of Licensed Products, provided that such further sublicenses shall be in accordance with and subject to all of the terms and conditions of this Section 2.2.

For purposes of clarification, the preceding provisions of this Section 2.2.2 shall not apply to Licensed Compounds with respect to which Retrophin **[***]** Ligand a License.

2.2.3 In accordance with the foregoing, unless Ligand agrees otherwise in writing, any License shall **[***]**.

2.2.4 It shall be a **[***]**.

2.3 No Trademark License. No right or license, express or implied, is granted to Retrophin to use any trademark, trade name, trade dress or service mark owned or Controlled by BMS, Ligand or any of their respective Affiliates. Retrophin, at its sole cost and expense, shall be responsible for the selection, registration and maintenance of all trademarks which it employs in connection with its activities conducted pursuant to this Agreement, if any, and shall own and control such trademarks.

2.4 No Implied Licenses. No license or other right is or shall be created or granted hereunder by implication, estoppel or otherwise. All such licenses and rights are or shall be granted only as expressly provided in this Agreement.

2.5 Retained Rights.

2.5.1 Retrophin understands and agrees that BMS shall retain the rights specified in Section 2.5 of the Upstream License Agreement.

2.5.2 Subject to the Upstream License Agreement, all rights not expressly granted under Section 2.1 are reserved by Ligand and may be used by Ligand for any purpose. Ligand expressly reserves and retains the right (i) to make, have made and use Licensed Compounds for any internal research purposes (including but not limited to for purposes of screening in support of Ligand's internal research programs), (ii) to support the filing and prosecution of patent applications, and (iii) to make, have made and use any Licensed Compound solely for use as an intermediate or starting material in the manufacture of any compound which is not a Licensed Compound.

2.5.3 Subject to the exclusive rights granted to Retrophin under this Article 2 and subject to the restrictions on use of Retrophin's Confidential Information under Article 11, [***]***. For purposes of clarity, nothing in the foregoing shall be construed to reserve to Ligand the right to engage in the discovery, Development and/or Commercialization of Active Compounds Covered by the Core Patent Rights exclusively licensed to Retrophin hereunder.

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2.6 Upstream License Agreement. Notwithstanding anything to the contrary in this Agreement, Retrophin understands and agrees (i) that this Agreement is subordinate to the Upstream License Agreement and the sublicense granted to Retrophin under this Agreement is limited in scope to the rights granted to Ligand in the Upstream License Agreement; (ii) this Agreement may be terminated if the Upstream License Agreement is terminated (iii) it will comply with all provisions of the Upstream License Agreement relevant to its activities as a Sublicensee (as defined in the Upstream License Agreement); (iv) BMS' exercise of its rights under the Upstream License Agreement shall not constitute a breach hereunder; (v) it will not take any action that would result in a breach of the Upstream License Agreement; and (vi) it will cooperate with and assist Ligand to meet its obligations under the Upstream License Agreement. Retrophin acknowledges that it has been provided with a copy of the Upstream License Agreement.

ARTICLE 3.
LIGAND RIGHT OF FIRST NEGOTIATION

3.1 BMS Right of First Negotiation. In the event that Retrophin desires to enter into a License arrangement with respect to any Licensed Compound ("Business Opportunity"), BMS shall be granted the Right of First Negotiation set forth in Article 3 of the Upstream License Agreement. Retrophin shall comply with the terms set forth in Sections 3.1.1 and 3.1.3-3.1.6 of the Upstream License Agreement. For the purposes of this Section 3.1, "Pharmacopeia" shall be replaced with "Retrophin" in Sections 3.1.1 and 3,1.3-3.1.6 of the Upstream License Agreement.

3.2 Ligand Right of Second Negotiation.

3.2.1 In the event that Retrophin desires to enter into a Business Opportunity, before entering into negotiations with any Third Party and after following the procedure set forth in Section 3.1 above, with respect to such License, Retrophin shall notify Ligand and provide Ligand with information necessary or useful to Ligand to evaluate the proposed License arrangement ("Evaluation Information"). The Parties shall negotiate in good faith the terms pursuant to which Ligand may obtain such Business Opportunity for a period of **[***]** days following the date of such notice (such period referred to as the "Ligand Negotiation Period").

3.2.2 Unless otherwise agreed between the Parties, **[***]***.**

3.2.3 Any License agreement entered into by Retrophin with a Third Party shall be consistent with the terms and conditions of this Agreement and shall fully enable Retrophin to fully perform all of its obligations under the Agreement which will continue in effect. As set forth in Section 2.2, any Sublicensee shall be bound by the terms and conditions of this Agreement in the same manner as Retrophin.

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ARTICLE 4.
TRANSFER OF KNOW-HOW

4.1 Documentation. Prior to the Effective Date, Ligand has provided to Retrophin one (1) electronic or paper copy of all documents, data or other information Controlled by Ligand as of the Effective Date to the extent that such documents, data and information are (i) reasonably necessary or useful for the manufacture, Development or Commercialization of the Listed Compounds (including SAR information) and subject to the Know-How license under Section 2.1 and (ii) are reasonably available to Ligand without undue searching; *provided however,* that subject to the last sentence of this Section 4.1, the foregoing shall in no event require Ligand to provide copies of manufacturing run records or laboratory notebook records; *further provided* that if Retrophin determines it needs additional documents, data or information for the manufacture, Development or Commercialization of the Licensed Compounds (including SAR information), Ligand shall use commercially reasonable efforts (at Retrophin's cost and expense) to determine whether it has such additional information and if Ligand has such information, it shall provide such information to Retrophin at Retrophin's cost and expense. Such documentation shall be deemed to be the Confidential Information of Ligand and shall not be used by Retrophin for any purpose other than Development, manufacture or Commercialization of Licensed Compounds and Licensed Products in accordance with this Agreement. Retrophin acknowledges that it has received from Ligand such documents, data and information prior to the Effective Date through access to the electronic data room established by Ligand for the Listed Compound and that Ligand has allowed Retrophin to print such documents. Ligand shall have no obligation to reformat or otherwise alter or modify any such materials, or to create materials in electronic form, in order to provide them to Retrophin; provided, that such information is readable by Retrophin in its current form. Any and all such materials delivered to Retrophin pursuant to this Section 4.1 are and shall remain, as between the Parties, the sole property of Ligand. Notwithstanding the foregoing, if at any time during the term of this Agreement Retrophin identifies particular documents, data or information (including laboratory notebook records) that are within the Know-How, but were not previously delivered to Retrophin, and that are reasonably necessary or useful for the continued manufacture, Development or Commercialization of a Licensed Compound or Licensed Product (including materials requested in connection with an audit or other inquiry by a Regulatory Authority), or are reasonably necessary or useful to support the filing and/or prosecution of patent rights Covering the Licensed Compounds or Licensed Products, Ligand shall promptly provide such material to Retrophin upon request to the extent that such items are in Ligand's possession and are available without undue searching.

4.2 Materials. Ligand shall have no obligation to provide Retrophin with samples of any compounds or other materials (other than the information provided under Section 4.1) under this Agreement, *provided* that upon written request by Retrophin, Ligand will authorize in writing the transfer by [***]*** to Retrophin of all existing clinical supplies of Licensed Product and all existing supplies of the active pharmaceutical ingredient of Licensed

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Product (including other materials that may be provided by or for Ligand to Retrophin pursuant to this Agreement, the "Transferred Materials"). Retrophin shall be responsible for any and all fees charged by [***]*** in connection with the transfer of the Transferred Materials to Retrophin. Any Transferred Materials are provided "AS IS". Retrophin shall be fully responsible for its and its Affiliates', Sublicensees' and contractors' use, storage, handling and disposition of the Transferred Materials. Under no circumstances shall Ligand be liable or responsible for Retrophin's or its Affiliates', Sublicensees' and contractors' use, storage, handling or disposition of the Transferred Materials, and Retrophin assumes sole responsibility for any claims, liabilities, damages and losses that might arise as a result of Retrophin's and its Affiliates', Sublicensees' and contractors' use, storage, handling or disposition of any Transferred Material. Retrophin shall indemnify, defend and hold harmless Ligand and its Affiliates, and their respective officers, directors, employees, agents, licensors, and their respective successors, heirs and assigns and representatives, from and against any and all damages, liabilities, losses, costs and expenses (including, without limitation, reasonable legal expenses, costs of litigation and reasonable attorney's fees) arising in connection with any claims, suits, proceedings, whether for money damages or equitable relief, of any kind, arising out of or relating, directly or indirectly, to Retrophin's, or any of its Affiliates', Sublicensees' or contractors' use, storage, handling or disposition of any Transferred Material. Transferred Materials may only be provided to Retrophin, its Affiliates, Sublicensees and contractors. The Transferred Materials shall be used by Retrophin solely for purposes of supporting the Development of the Licensed Compounds and Licensed Products.

ARTICLE 5.
DEVELOPMENT

5.1 Development and Development Plan.

5.1.1 Commercially Reasonable Efforts. Retrophin (or its Sublicensees, as applicable) shall use sustained Commercially Reasonable Efforts to Develop at least one Licensed Compound and Licensed Product, including using Commercially Reasonable Efforts to expeditiously carry out the clinical development for the Licensed Compounds and Licensed Products (including expeditiously pursuing regulatory filings and Approvals and marketing authorizations for at least one Licensed Compound and Licensed Product) in accordance with the Development Plan.

5.1.2 Development Plan. The initial Development Plan is attached hereto as Appendix 3 to the Agreement.

5.2 Development Reports. Retrophin will provide Ligand with (a) semi-annual written development reports within **[***]** days following June and December of each **[***]** and (b) quarterly telephonic development reports within **[***]** days following March and September of each **[***]**, in each case presenting a summary of the Development activities

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accomplished by Retrophin during the applicable period, including as applicable updates to the Development Plan, and significant results, information and data generated with respect to Licensed Compounds and Licensed Products. Upon reasonable request by Ligand, Retrophin shall also meet in-person with Ligand to review Retrophin's Development activities for the Licensed Compounds and Licensed Products. In addition, prior to Retrophin entering into a License agreement with a Third Party, upon reasonable request by Ligand, but no more than once per **[***]**, Retrophin shall present to Ligand, at Retrophin's facilities, summaries of (and, at the request of Ligand, with copies of) clinical protocols, investigator brochures, regulatory submissions and correspondence from regulatory agencies with respect to Licensed Compound and Licensed Product that have been prepared or received by Retrophin as of the date of such request by Ligand.

5.3 Records. Retrophin shall maintain complete and accurate records of all work conducted in furtherance of the Development and Commercialization of the Licensed Compounds and Licensed Products and all material results, data and developments made in conducting such activities. Such records shall be maintained sufficient detail and in good scientific manner appropriate for patent and regulatory purposes. If Ligand believes in good faith that Retrophin may not be complying with its obligations under this Section 5.3, Ligand shall provide written notice thereof to Retrophin identifying the basis for Ligand's belief, and Retrophin shall allow an independent Third Party that has expertise in reviewing the books and records and financial information, obligations and agreements of pre-clinical and clinical stage bio-technology companies, as to which Retrophin has no reasonable objection, to review such records on behalf of Ligand to verify that Retrophin is complying with this Section 5.3. Such review shall be conducted no more frequently than once per any twelve (12) month period, at Ligand's cost and upon reasonable advance notice at mutually agreed upon times during normal business hours; *provided, however,* if the independent Third Party determines that Retrophin is not in compliance with this Section 5.3 and Retrophin would owe Ligand at least 10% more in royalties or other payments, Retrophin shall reimburse Ligand for all costs and expenses related to the independent Third Party's review.

5.4 Development Responsibilities and Costs. Retrophin shall have sole responsibility for, and shall bear the cost of conducting, all Development with respect to the Licensed Compounds and Licensed Products.

5.5 Regulatory Responsibilities and Costs. Retrophin **[***]*****. Retrophin shall be responsible for meeting the requirements of all pre-approval inspections required by any Regulatory Authorities. Except as set forth in Section 13.4, Retrophin or its Affiliate or Sublicensee shall own all INDs, NDAs, Approvals and submissions in connection therewith and all Approvals shall be obtained by and in the name of Retrophin or its Affiliate or Sublicensee.

5.6 Subcontracting. Subject to and without limiting Section 2.2, Retrophin may perform any activities in support of its Development or Commercialization of Licensed

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Compounds and Licensed Products through subcontracting to a Third Party contractor or contract service organization; *provided, however*: (a) Retrophin shall enter into an appropriate written agreement with any such Third Party subcontractor such that the subcontractor shall be bound by all applicable provisions of this Agreement to the same extent as Retrophin and such that Ligand's rights under this Agreement and BMS' rights under the Upstream License Agreement are not adversely affected; (b) any such Third Party subcontractor to whom Retrophin discloses Confidential Information of Ligand shall enter into an appropriate written agreement obligating such Third Party to be bound by obligations of confidentiality and restrictions on use of such Confidential Information that are no less restrictive than the obligations in this Agreement; (c) Retrophin will obligate such Third Party to agree in writing to assign or license (with the right to grant sublicenses) to Retrophin any inventions (and any patent rights covering such inventions) made by such Third Party in performing such services for Retrophin; and (d) Retrophin shall at all times be responsible for the performance of such subcontractor.

ARTICLE 6.
COMMERCIALIZATION

6.1 Retrophin Obligations. Retrophin (or its Sublicensees, as applicable) shall use sustained Commercially Reasonable Efforts to Commercialize at least **[***]** Licensed Product in the Territory, including the Major Market Countries. Without limiting the foregoing, Retrophin shall:

6.1.1 use Commercially Reasonable Efforts to obtain Approvals in a Major Market Country with respect to at least **[***]*** Licensed Product and to effect the First Commercial Sale thereof in such country as soon as reasonably practicable after receipt of such Approvals;

6.1.2 Initiation of a Phase 2 Trial for at least **[***]** Licensed Compound no later than **[***]**;

6.1.3 File for Approval for at least **[***]** Orphan Licensed Product no later than **[***]**; and

6.1.4 File for Approval for at least **[***]** Licensed Product other than the first Orphan Licensed Product no later than **[***]**.

6.2 Continued Availability. Following the First Commercial Sale of a Licensed Product in a Major Market Country in the Territory and until the expiration or termination of this Agreement, Retrophin shall use Commercially Reasonable Efforts to supply and keep such Licensed Product reasonably available to the public in such country.

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6.3 Marking. Each Licensed Product Commercialized by Retrophin under this Agreement shall be marked (to the extent not prohibited by applicable Laws): (i) with a notice that such Licensed Product is sold under a license from BMS and Ligand and (ii) with applicable patent and other intellectual property notices relating to the Core Patent Rights in such a manner as may be required by applicable Law.

6.4 Reports. Retrophin shall provide Ligand with semi-annual written reports within [***]*** days following the end of June and December of each **[***]** summarizing significant commercial activities and events with respect to Licensed Products during the just ended six month period.

ARTICLE 7.
MANUFACTURE AND SUPPLY

7.1 Manufacture and Supply. Retrophin shall be solely responsible at its expense for making or having made all of its requirements of the Licensed Compounds and Licensed Products.

ARTICLE 8.
FINANCIAL TERMS

8.1 Consideration. In partial consideration of the rights granted by Ligand to Retrophin pursuant to this Agreement, Retrophin shall make the payments to Ligand as provided for in this Article 8.

8.2 Development Milestone Payments.

8.2.1 Development Milestone Payments. Retrophin shall make milestone payments to Ligand upon achievement of each of the milestone events in the amounts set forth below in Table 1. The first milestone payment shall be payable by Retrophin to Ligand within **[***]** days of execution of the Agreement. Notwithstanding Section 15.4 or any other provision herein, the last milestone payment shall be payable by Retrophin to Ligand upon the Closing of Retrophin's Exit Transaction. Subject to Section 8.2.2, the remainder of the milestone payments set forth below will be payable by Retrophin to Ligand within **[***]** days of the achievement of the specified milestone event with respect to each Licensed Compound. The milestone payments shall not be refundable or returnable in any event, nor shall they be creditable against royalties or other payments.

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Table 1

Milestone Event	Milestone Payment
Execution of Agreement	$1.15 million
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]

In the event that a milestone event is achieved that triggers a development milestone payment as set forth above, if the **[***].** For example, **[***]**.

8.2.2 **[***]**.

8.2.3 **[***]***.**

8.3 Royalty Payments.

8.3.1 Retrophin shall pay to Ligand in cash the following royalty payments on the total aggregate annual Net Sales in the Territory of all Licensed Products in a particular **[***]** by Retrophin, its Affiliates, and Sublicensees in the Territory:

Aggregate Annual Worldwide Net Sales of All Licensed Products in a [***]	Royalty Rate for Licensed Products in a [***]
Up to **[***]** Dollars ($[***])	**[***]** %
More than **[***]** Dollars ($[***])	**[***]** %

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By way of example, in a given **[***]**, if the aggregate annual worldwide Net Sales for all Licensed Products is $**[***]**, the royalty payment under this Section 8.3.1 would be calculated in accordance with the following formula: **[***]** Million Dollars.

8.3.2 Royalty Term. Royalties shall be payable on a **[***]** of (i) **[***]** or (ii) **[***]** or (iii) **[***]**.

8.3.3 **[***]**. **[***]**. Prior to Retrophin or its Sublicensee exercising its **[***]** under this Section 8.3.3, Retrophin shall provide Ligand with **[***]**. The Parties shall discuss the best course of action to resolve such potential **[***]**, provided that such discussions shall not limit or delay Retrophin's or its Sublicensee's right to **[***]**.

Except as set forth above, **[***]**.

8.3.4 Royalty Conditions. The royalties under Section 8.3.1 shall be subject to the following conditions:

a) that only one royalty shall be due with respect to the same unit of Licensed Product;

b) that no royalties shall be due upon the sale or other transfer among Retrophin, its Affiliates, or Sublicensees, but in such cases the royalty shall be due and calculated upon Retrophin's or its Affiliate's or Sublicensee's Net Sales of Licensed Product to the first independent Third Party; and

c) no royalties shall accrue on the disposition of Licensed Product in reasonable quantities by Retrophin, its Affiliates or Sublicensees as part of an expanded access program, as *bona fide* samples, as part of Phase 4 Trials or as donations to non-profit institutions or government agencies for non-commercial purposes; *provided, however,* in each case, that neither Retrophin, its Affiliate or Sublicensees receives any payment for such Licensed Product.

8.4 Manner of Payment. All payments to be made by Retrophin hereunder shall be made in Dollars by wire transfer of immediately available funds to such United States bank account as shall be designated by Ligand. Late payments shall bear interest at the rate provided in Section 8.9.

8.5 Sales Reports and Royalty Payments. After the First Commercial Sale of a Licensed Product and during the term of this Agreement, Retrophin shall furnish to Ligand a written report, within [***]*** days after the end of each [***] (or portion thereof, if this Agreement terminates during a [***]), showing the amount of royalty due for such [***] (or portion

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thereof). Royalty payments for each **[***]** shall be due at the same time as such written report for the **[***]**. With each **[***]**, Retrophin shall deliver to Ligand a full and accurate accounting to include at least the following information:

[***]

[***]

[***]

[***]

[***]

If no royalty or payment is due for any royalty period hereunder, Retrophin shall so report.

8.6 Sales Record Audit. Retrophin shall keep, and shall cause each of its Affiliates, and Sublicensees, if any, to keep, full and accurate books of accounting in accordance with GAAP as may be reasonably necessary for the purpose of calculating the royalties payable to Ligand. Such books of accounting (including those of Retrophin's Affiliates, and Sublicensees, if any) shall be kept at their principal place of business and, with all necessary supporting data, shall during all reasonable times for the **[***]** years next following the end of the **[***]** to which each shall pertain, be open for inspection at reasonable times upon written notice by Ligand and at Ligand's sole cost, no more than once per any **[***]** month period, by an independent nationally recognized certified public accounting firm selected by Ligand as to which Retrophin has no reasonable objection, for the purpose of verifying royalty statements for compliance with this Agreement. Such accountant must have agreed in writing to maintain all information learned in confidence, except as necessary to disclose to Ligand such compliance or noncompliance by Retrophin. The results of each inspection, if any, shall be**[***]**. Ligand shall pay for such inspections, except that in the event there is any upward adjustment in aggregate royalties payable for the [***]*** period of such inspection of more than **[***]** of the amount paid, Retrophin shall pay for the reasonable out-of-pocket costs of such inspection. Any underpayments shall be paid by Retrophin within **[***]** of notification of the results of such inspection. Any overpayments shall be fully creditable against amounts payable in subsequent payment periods or, if no such amounts become payable within **[***]** days after notification of such results, shall be refunded.

8.7 Currency Exchange. With respect to Net Sales invoiced in Dollars, the Net Sales and the amounts due to Ligand hereunder shall be expressed in Dollars. With respect to Net Sales invoiced in a currency other than Dollars, the Net Sales shall be expressed in the domestic currency of the entity making the sale, together with the Dollar equivalent, calculated using the arithmetic average of the spot rates on the close of business on the last Business Day of

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[***] in which the Net Sales were made. The "closing mid-point rates" found in the "dollar spot forward against the dollar" table published by The Financial Times, or any other publication as may be agreed to by the Parties in writing, shall be used as the source of spot rates to calculate the average as defined in the preceding sentence. All payments shall be made in Dollars.

8.8 Tax Withholding. In the event that any withholding taxes or similar charges are levied or assessed by any taxing authority in the Territory with respect to payments made by Retrophin to Ligand under this Agreement, Retrophin shall pay such taxes or similar charges to the proper taxing authority. Retrophin may deduct the amount of such taxes or similar charges paid by Retrophin to such taxing authority from the applicable royalties or other payment otherwise payable to Ligand, subject to the following. Retrophin shall promptly provide Ligand with evidence of such tax payment obligation together with an original receipt for such tax payments (or a certified copy, if the original is not available) and other documentation as Ligand reasonably determines is required for the purpose of Ligand's tax returns. Retrophin, its Affiliates and Sublicensees shall cooperate with Ligand to enable the claiming of a reduction or exemption from withholding taxes on payments under any applicable convention on the avoidance of double taxation or similar agreement in force and shall provide to Ligand proper evidence of payments of withholding tax and assist Ligand by obtaining or providing in as far as possible the required documentation for the purpose of Ligand's tax returns. Retrophin's obligation vis-a-vis the tax authorities shall remain unaffected by the provisions of this Section 8.8.

8.9 Interest Due. Without limiting any other rights or remedies available to Ligand, Retrophin shall pay Ligand interest on any payments that are not paid on or before the date **[***]** days after the date such payments are due under this Agreement at a rate of one and **[***]** per month or the maximum applicable legal rate, if less, calculated on the total number of days payment is delinquent.

8.10 **[***]***.**

8.10.1 In addition to the above milestone and royalty payments, Retrophin shall pay to Ligand the following **[***]**:

a) **[***]**; and

b) **[***]**.

8.10.2 **[***]**:

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[***] [***]
[***] [***]
[***] [***]

8.10.3 Such **[***]**. Such **[***]** to Ligand shall be due within **[***]** days following **[***]**.

8.10.4 For purposes of this Section 8.10, **[***],** but does not include (i) **[***]** or (ii) **[***]***.**

ARTICLE 9.
REPRESENTATIONS AND WARRANTIES; DISCLAIMER;
LIMITATION OF LIABILITY

9.1 Mutual Representations and Warranties. Each Party represents and warrants to the other Party that (i) it has all requisite corporate power and authority to enter into this Agreement and to perform its obligations under this Agreement, (ii) execution of this Agreement and the performance by such Party of its obligations hereunder have been duly authorized, (iii) this Agreement is legally binding and enforceable on such Party in accordance with its terms and (iv) the performance of this Agreement by it does not create a material breach or material default under any other agreement to which it is a Party.

9.2 Representations, Warranties and Covenants of Ligand. Ligand represents, warrants and covenants that as of the Effective Date: (i) there is no litigation pending, or to the knowledge of Ligand threatened, which alleges, or any written communication alleging, that Ligand's activities with respect to the Patent Rights or the Licensed Compounds have infringed or misappropriated any of the intellectual property rights of any Third Party, (ii) all fees (including legal fees) required to be paid by Ligand in order to maintain the Patent Rights have been paid to date, (iii) it has not previously granted, assigned, transferred, conveyed, encumbered, mortgaged, pledged, hypothesized or licensed (or granted an option to assign, transfer, convey, encumber, mortgage, pledge, hypothesize or license) its right, title and interest in the Patent Rights or the Know-How, (iv) all of its actions related to its use of the Patent Rights and Know-How and the Development and Commercialization of the Licensed Compounds and Licensed Products complied with all applicable legal requirements and complied in all material respects with all regulatory requirements (except for the actions of Ligand's clinical research organization, Cetero Research, as to which no representations or warranties are made hereunder), (v) to the knowledge of Ligand (A) the Patent Rights and Know-How are subsisting, valid and enforceable and Ligand has not received any notice of a claim alleging that any of the Patent Rights infringes or otherwise violates any intellectual property or proprietary right of any Third Party, (B) the manufacture, Development and Commercialization of the Listed Compound by Ligand did not interfere with the intellectual property rights of Third Parties, (C) it has not received any notice that any Person is infringing the Patent Rights and (D) it has not received any notice that a patent application within the Patent Rights is the subject of any pending interference, opposition, cancellation, protest or other challenge or adversarial proceeding, (vi) it has complied with the terms and conditions of the Upstream License Agreement in all material

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respects and has the necessary right, title and power to sublicense the Patent Rights or the Know-How, (vii) it has discontinued its internal drug discovery and development programs for the Listed Compound and that it has no active internal programs for the discovery or development of the Listed Compound and (vii) other than the Core Patent Rights, Ligand does not Control any patent(s) or patent application(s) that are reasonably necessary or useful for the Development or Commercialization of any Listed Compound or that claims the composition of matter of any Listed Compound or a method of manufacture or use of any Listed Compound.

9.3 Representations, Warranties and Covenants of Retrophin.

9.3.1 Retrophin covenants that (i) all of its activities related to its use of the Patent Rights and Know-How, and the Development and Commercialization of the Licensed Compounds and Licensed Products, pursuant to this Agreement shall comply with all applicable legal and regulatory requirements and (ii) it shall not knowingly engage in any activities (A) that use the Patent Rights and/or Know-How in a manner that is outside the scope of the license rights granted to it hereunder or (B) that infringe the intellectual property rights of any Third Party.

9.3.2 Retrophin has not, directly or indirectly, offered, promised, paid, authorized or given, and will not in the future, offer, promise, pay, authorize or give, money or anything of value, directly or indirectly, to any Government Official (as defined below) or Other Covered Party (as defined below) for the purpose of: (i) influencing any act or decision of the Government Official or Other Covered Party; (ii) inducing the Government Official or Other Covered Party to do or omit to do an act in violation of a lawful duty; (iii) securing any improper advantage; or (iv) inducing the Government Official or Other Covered Party to influence the act or decision of a government or government instrumentality, in order to obtain or retain business, or direct business to, any person or entity, in any way related to this Agreement. For purposes of this Agreement: (i) "Government Official" means any official, officer, employee or representative of: (A) any federal, state, provincial, county or municipal government or any department or agency thereof; (B) any public international organization or any department or agency thereof; or (C) any company or other entity owned or controlled by any government; and (ii) "Other Covered Party" means any political party or party official, or any candidate for political office.

9.3.3 Retrophin maintains and shall maintain a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets, including records of payments to any third parties, Government Officials and Other Covered Parties; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

9.3.4 Anti-Corruption Compliance.

9.3.4.1 In performing under this Agreement, Retrophin and its Affiliates agree to comply with all applicable anti-corruption laws, including Foreign Corrupt Practices Act of 1977, as amended ("FCPA") and all laws enacted to implement the OECD Convention on Combating Bribery of Foreign Officials in International Business Transactions.

9.3.4.2 Any third party who represents Retrophin or its Affiliates in connection with, or who will be involved in performing, this Agreement or any related activity, shall certify to compliance with all applicable anti-corruption laws and the obligations set forth in this Section 9.3.5 prior to any involvement in this Agreement or any related activity.

9.3.4.3 Retrophin is not aware of any Government Official or Other Covered Party having any financial interest in the subject matter of this Agreement or in any way personally benefiting, directly or indirectly, from this Agreement.

9.3.4.4 No political contributions or charitable donations shall be given, offered, promised or paid at the request of any Government Official or Other Covered Party that is in any way related to this Agreement or any related activity, without Ligand's prior written approval.

9.3.4.5 In the event that Retrophin violates the FCPA or any applicable anti-corruption law or breaches any provision in this Section 9.3, Ligand shall have the right to unilaterally terminate this Agreement.

9.4 Disclaimer. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY PATENT RIGHTS, CONFIDENTIAL INFORMATION OR KNOW-HOW OF SUCH PARTY OR ANY LICENSE GRANTED BY SUCH PARTY HEREUNDER, OR WITH RESPECT TO ANY COMPOUNDS, INCLUDING BUT NOT LIMITED TO THE TRANSFERRED MATERIALS, OR PRODUCTS. FURTHERMORE, EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES THAT ANY PATENT, PATENT APPLICATION, OR OTHER PROPRIETARY RIGHTS INCLUDED IN PATENT RIGHTS, CONFIDENTIAL INFORMATION OR KNOW-HOW LICENSED BY SUCH PARTY TO THE OTHER PARTY HEREUNDER ARE VALID OR ENFORCEABLE OR THAT USE OF SUCH PATENT RIGHTS, CONFIDENTIAL INFORMATION OR KNOW-HOW CONTEMPLATED HEREUNDER DOES NOT INFRINGE ANY PATENT RIGHTS OR OTHER INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY.

9.5 Limitation of Liability. NOTWITHSTANDING ANYTHING IN THIS AGREEMENT OR OTHERWISE, NEITHER PARTY SHALL BE LIABLE TO THE OTHER WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT, WHETHER UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY, FOR ANY INCIDENTAL, INDIRECT, SPECIAL, EXEMPLARY, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES (INCLUDING

CONSEQUENTIAL DAMAGES CONSISTING OF LOST PROFITS, LOSS OF USE, DAMAGE TO GOODWILL, OR LOSS OF BUSINESS) AND, IN ANY CASE, LIGAND SHALL NOT BE LIABLE IN AN AMOUNT GREATER THAN THE AMOUNTS PAID BY RETROPHIN TO LIGAND UNDER ARTICLE 8 OF THIS AGREEMENT; *PROVIDED*, *HOWEVER*, THAT THE FOREGOING SHALL NOT APPLY TO ANY BREACH BY RETROPHIN OF THE LICENSES GRANTED TO IT UNDER THIS AGREEMENT THAT IS AN INFRINGEMENT OF PATENT RIGHTS NOT INCLUDED IN THE PATENT RIGHTS LICENSED TO RETROPHIN HEREUNDER, OR ANY BREACH BY EITHER PARTY OF THIS ARTICLE 9 OR ARTICLE 11 HEREOF.

ARTICLE 10.
OWNERSHIP; PATENT MAINTENANCE; INFRINGEMENT; EXTENSIONS

10.1 Ownership of Inventions. Inventorship of inventions conceived or reduced to practice in the course of activities performed under or contemplated by this Agreement shall be determined by application of United States patent Laws pertaining to inventorship. If such inventions are jointly invented by one or more employees, consultants or contractors of each Party, such inventions shall be jointly owned ("Joint Invention"), and if one or more claims included in an issued patent or pending patent application which is filed in a patent office in the Territory claim such Joint Invention, such claims shall be jointly owned ("Joint Patent Rights"). If such an invention is solely invented by an employee, consultant or contractor of a Party, such invention shall be owned by such Party, and any patent filed claiming such solely owned invention shall also be owned by such Party. Subject to Section 5.6 with respect to contractors, each Party shall enter into binding agreements obligating all employees, consultants and contractors performing activities under or contemplated by this Agreement, including activities related to the Patent Rights, Licensed Compounds or Licensed Products, to assign his/her interest in any invention conceived or reduced to practice in the course of such activities to the Party for which such employee, consultant or contractor is providing its services. This Agreement shall be understood to be a joint research agreement in accordance with 35 U.S.C. § 103(c)(3) to develop the Licensed Compounds and Licensed Products. The filing, prosecution, maintenance and enforcement of Joint Patent Rights which are Core Patent Rights shall be handled in accordance with this Article 10.

10.2 Filing, Prosecution and Maintenance of Core Patent Rights. Retrophin shall be responsible, using outside patent counsel selected by Retrophin and acceptable to Ligand, such acceptance not to be unreasonably withheld or delayed, for the preparation, prosecution (including, without limitation, any interferences, reissue proceedings and reexaminations) and maintenance of Core Patent Rights. Promptly following the Effective Date, the Parties shall cooperate to expeditiously transfer such responsibility for the further preparation, prosecution and maintenance of Core Patent Rights to such outside patent counsel. Retrophin shall be responsible for all costs incurred by Retrophin with respect to such preparation, prosecution and maintenance of Core Patent Rights so long as Retrophin remains responsible for such preparation, prosecution and maintenance. Upon request by Ligand, Retrophin (or its patent counsel) shall provide Ligand with an update of the filing, prosecution and maintenance status for each of the Core Patent Rights. Each Party shall reasonably consult with and cooperate with the other Party with respect to the preparation, prosecution and

maintenance of the Core Patent Rights reasonably prior to any deadline or action with the U.S. Patent & Trademark Office or any foreign patent office, and Retrophin (or its patent counsel) shall furnish to Ligand copies of all relevant documents reasonably in advance of such consultation. Retrophin (or its patent counsel) shall provide to Ligand copies of any papers relating to the filing, prosecution or maintenance of the Core Patent Rights promptly upon their being filed or received. Retrophin shall not knowingly take any action during prosecution and maintenance of the Core Patent Rights that would materially adversely affect them (including any reduction in claim scope), without Ligand's prior consent, such consent not to be unreasonably withheld, conditioned or delayed.

10.3 Patent Abandonment.

10.3.1 Generally. In no event will Retrophin knowingly permit any of the Core Patent Rights to be abandoned in any country in the Territory or elect not to file a new patent application claiming priority to a patent application within the Core Patent Rights either before such patent application's issuance or within the time period required for the filing of an international (i.e., Patent Cooperation Treaty), regional (including European Patent Office) or national application, without Ligand first being given an opportunity to assume full responsibility for the continued prosecution and maintenance of such Core Patent Rights, or the filing of such new patent application. Accordingly, Retrophin (or its patent counsel) shall provide Ligand with notice of the allowance and expected issuance date of any patent within the Core Patent Rights, or any of the aforementioned filing deadlines, and Ligand shall provide Retrophin with prompt notice as to whether Ligand desires Retrophin to file such new patent application. In the event that Retrophin decides either (i) not to continue the prosecution or maintenance of a patent application or patent within Core Patent Rights in any country or (ii) not to file such new patent application requested to be filed by Ligand, Retrophin shall provide Ligand with notice of this decision at least **[***]*** days prior to any pending lapse or abandonment thereof.

10.3.2 Ligand Option to Assume Responsibility. Ligand shall thereupon have the right, but not the obligation, to assume responsibility for all reasonably documented external costs (subject to Section 10.3.3) thereafter incurred associated with the filing and/or further prosecution and maintenance of such patents and patent applications, on a patent-by-patent and country-by-country basis. The outside patent counsel selected by Retrophin shall proceed with such filing and/or further prosecution and maintenance promptly upon receipt of written notice from Ligand of its election to assume such responsibility, with such filing to occur prior to the issuance of the patent to which the application claims priority or expiration of the applicable filing deadline, as set forth above. In the event that Ligand assumes such responsibility for such filing, prosecution and maintenance costs (subject to Section 10.3.3), upon the reasonable request by Ligand, Retrophin shall transfer the responsibility for such filing, prosecution and maintenance of such patent applications and patents to outside patent counsel selected by Ligand; *provided, however,* Retrophin shall (i) provide sufficient written

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notice to Ligand of any such election such that the relevant transfer shall not prejudice the filing, prosecution and/or maintenance of patent rights (where possible, such notice shall be provided at least [***]*** days prior to any pending lapse or abandonment thereof); (ii) transfer or cause to be transferred to Ligand or its patent counsel the complete prosecution file for the relevant patents and patent applications, including all correspondence and filings with patent authorities with respect thereto; and (iii) at the reasonable request of Ligand and without demanding any further consideration therefore, do all things necessary, proper or advisable, including without limitation the execution, acknowledgment and recordation of specific assignments, oaths, declarations and other documents on a country-by-country basis, to assist Ligand in obtaining, perfecting, sustaining and/or enforcing such patent(s). Such patent applications and patents shall otherwise continue to be subject to all of the terms and conditions of the Agreement in the same way as the other Core Patent Rights, as applicable.

10.3.3 Retrophin Responsibility for Patent Costs. Notwithstanding anything to the contrary under this Article 10, unless the Parties otherwise agree in writing, Retrophin shall remain responsible for all costs incurred after the Effective Date with respect to preparation, prosecution and maintenance of the Core Patent Rights covering Licensed Compounds.

10.4 Enforcement of Core Patent Rights Against Infringers.

10.4.1 Enforcement by Retrophin.

a) In the event that Ligand or Retrophin becomes aware of a suspected infringement of any Core Patent Right exclusively licensed to Retrophin under this Agreement, such Party shall notify the other Party promptly, and following such notification, the Parties shall confer. Retrophin shall have the right, but shall not be obligated, to bring an infringement action with respect to such infringement at its own expense, in its own name and entirely under its own direction and control, subject to the following. Ligand shall reasonably assist Retrophin (at Retrophin's expense) in any action or proceeding being prosecuted if so requested, and shall lend its name to and join as a nominal party in such actions or proceedings if reasonably requested by Retrophin or required by applicable Laws. Ligand shall have the right to participate and be represented in any such suit by its own counsel at its own expense. No settlement of any such action or proceeding which restricts the scope, or adversely affects the enforceability, of a Core Patent Right may be entered into by Retrophin without the prior written consent of Ligand, which consent shall not be unreasonably withheld, delayed or conditioned.

b) Ligand shall have the right at its discretion to grant to Retrophin such rights (including assignment of the applicable Core Patent Rights) as may be necessary for Retrophin to exercise its rights under this Section 10.4 (including defending or enforcing any Core Patent Rights) without Ligand's involvement. In the event of such grant of rights

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(including assignment) with respect to any Core Patent Rights, such Core Patent Rights shall continue to be treated as Core Patent Rights and shall otherwise continue to be subject to all of the terms and conditions of the Agreement in the same way as the other applicable Core Patent Rights. For purposes of clarity, election or non-election by Ligand to grant or assign rights to Retrophin under this Section 10.4.1(b) shall not limit Ligand's obligations under Section 10.4.1(a) to reasonably assist Retrophin in any action or proceeding, or to join in such action or proceeding upon request by Retrophin if such joinder is necessary under applicable Laws for Retrophin to exercise its rights under this Section 10.4.

10.4.2 Enforcement by Ligand. If Retrophin elects not to bring any action for infringement described in Section 10.4.1 and so notifies Ligand, then Ligand may bring such action at its own expense, in its own name and entirely under its own direction and control, subject to the following. Retrophin shall reasonably assist Ligand (at Ligand's expense) in any action or proceeding being prosecuted if so requested, and shall lend its name to such actions or proceedings if requested by Ligand or required by applicable Laws. Retrophin shall have the right to participate and be represented in any such suit by its own counsel at its own expense. No settlement of any such action or proceeding which restricts the scope, or adversely affects the enforceability, of a Core Patent Right may be entered into by Ligand without the prior written consent of Retrophin, which consent shall not be unreasonably withheld, delayed or conditioned.

10.4.3 Withdrawal. If either Party brings an action or proceeding under this Section 10.4 and subsequently ceases to pursue or withdraws from such action or proceeding, it shall promptly notify the other Party and the other Party may substitute itself for the withdrawing Party under the terms of this Section 10.4.

10.4.4 Damages. In the event that either Party exercises the rights conferred in this Section 10.4 and recovers any damages or other sums in such action, suit or proceeding or in settlement thereof, such damages or other sums recovered shall **[***]**. If such recovery is insufficient **[***]***. If after such [***] any funds shall remain from such damages or other sums recovered, such funds shall be [***] under this** Section 10.4; *provided*, *however*, that if **[***]**.

10.5 Patent Term Extension. Ligand and Retrophin shall each cooperate with one another and shall use commercially reasonable efforts in obtaining patent term extension (including without limitation, any pediatric exclusivity extensions as may be available) or supplemental protection certificates or their equivalents in any country with respect to patent rights covering the Licensed Products. If elections with respect to obtaining such patent term extensions are to be made, Retrophin shall have the right to make the election to seek patent term extension or supplemental protection; *provided*, *however,* such election will be made so as to maximize the period of marketing exclusivity for the Licensed Product. For such purpose, for all Approvals Retrophin shall provide Ligand with written notice of any expected Approval at least

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[***] days prior to the expected date of Approval, as well as notice within **[***]** business days of receiving each Approval confirming the date of such Approval. Notification of the receipt of an Approval shall be in accordance with Section 15.2.

10.6 Data Exclusivity and Orange Book Listings.

10.6.1 With respect to data exclusivity periods (such as those periods listed in the FDA's Orange Book (including without limitation any available pediatric extensions) or periods under national implementations of Article 10.1(a)(iii) of Directive 2001/EC/83, and all international equivalents), Retrophin shall use commercially reasonable efforts consistent with its obligations under applicable Law to seek, maintain and enforce all such data exclusivity periods available for the Licensed Products. With respect to filings in the FDA Orange Book (and foreign equivalents) for issued patents for a Licensed Product, Retrophin shall, consistent with its obligations under applicable Law, list in a timely manner and maintain all applicable Core Patent Rights and other patents Controlled by Retrophin required to be filed by it, or that it is permitted to file, under applicable Law. At least **[***]*** days prior to an anticipated deadline for the filing of patent listing i**nfo**rmation for Core Patent Rights, Retrophin will consult with Ligand regarding the content of such filing. In the event of a dispute between the Pa**rti**es as to whether a Core Patent Right can be filed and/or the content of such filing, the Parties will take expedited steps to resolve the dispute as promptly as possible, including seeking advice of an independent legal counsel to guide their decision. Ligand shall use commercially reasonable efforts consistent with its obligations under applicable Law to provide reasonable cooperation to Retrophin in filing and maintaining such Orange Book (and foreign equivalent) listings.

10.6.2 Without limiting the foregoing, Ligand shall have the right at its discretion to grant to Retrophin such rights (including assignment of the applicable Core Patent Rights) as may be necessary for Retrophin to exercise its rights under this Section 10.6 (including seeking, maintaining and enforcing all data exclusivity periods) without Ligand's involvement. In the event of such grant of rights (including assignment) with respect to any Core Patent Rights, such Core Patent Rights shall continue to be treated as Core Patent Rights and shall otherwise continue to be subject to all of the terms and conditions of the Agreement in the same way as the other applicable Core Patent Rights. For purposes of clarity, election by Ligand to grant or assign rights to Retrophin under this Section 10.6.2 shall not limit Ligand's obligation under Section 10.6.1 to provide reasonable cooperation to Retrophin to the extent such cooperation is reasonably necessary for Retrophin in filing and maintaining such Orange Book (and foreign equivalent) listings.

10.7 Notification of Patent Certification. Each Party shall notify and provide the other Party with copies of any allegations of alleged patent invalidity, enforceability or non-infringement of a Core Patent Right pursuant to a Paragraph IV Patent Certification by a Third Party filing an Abbreviated NDA, an application under §505(b)(2) or other similar patent

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certification by a Third Party, and any foreign equivalent thereof. Such notification and copies shall be provided to the other Party within **[***]** days after such Party receives such certification, and shall be sent to the address set forth in Section 15.2. In addition, upon request by Ligand, Retrophin shall provide reasonable assistance and cooperation (including, without limitation, making available to Ligand documents possessed by Retrophin that are reasonably required by Ligand and making available personnel for interviews and testimony) in any actions reasonably undertaken by Ligand to contest any such patent certification.

ARTICLE 11.
NONDISCLOSURE OF CONFIDENTIAL INFORMATION

11.1 Nondisclosure. Each Party agrees that, for so long as this Agreement is in effect and for a period of [***]*** years thereafter, a Party (the "Receiving Party") receiving or possessing Confidential Information of the other Party (the "Disclosing Party") (or that has received any such Confidential Information from the other Party prior to the Effective Date) shall (i) maintain in confidence such Confidential Information using not less than the efforts such Receiving Party uses to maintain in confidence its own proprietary information of similar kind and value, but in no event shall the Receiving Party use less than a reasonable standard of care, (ii) not disclose such Confidential Information to any Third Party without the prior written consent of the Disclosing Party, except for disclosures expressly permitted below, and (iii) not use such Confidential Information for any purpose except those permitted by this Agreement (it being understood that this clause (iii) shall not create or imply any rights or licenses not expressly granted hereunder).

11.1.1 Confidentiality of Know-How for Disclosure Purposes. During such time as the license to the Know-How granted under Section 2.1 is in effect, solely for disclosure purposes to Third Parties, the Know-How shall be deemed to be Confidential Information of Ligand and Retrophin under Article 11, Ligand and Retrophin shall be deemed to be a Disclosing Party of the Know-How under Article 11, and Ligand and its respective Affiliates shall be deemed not to have known such Know-How prior to disclosure for the purposes of Section 11.1.2(b). Other than for disclosure purposes to Third Parties, the Know-How shall solely be the Confidential Information of Ligand.

11.1.2 Exceptions. The obligations in Section 11.1 shall not apply with respect to any portion of the Confidential Information that the Receiving Party can show by competent proof:

a) is publicly disclosed by the Disclosing Party, either before or after it is disclosed to the Receiving Party hereunder;

b) was known to the Receiving Party or any of its Affiliates, without any obligation to keep it confidential or any restriction on its use, prior to disclosure by the Disclosing Party;

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c) is subsequently disclosed to the Receiving Party or any of its Affiliates by a Third Party lawfully in possession thereof and without any obligation to keep it confidential or any restriction on its use;

d) is published by a Third Party or otherwise becomes publicly available or enters the public domain, either before or after it is disclosed to the Receiving Party; or

e) has been independently developed after disclosure by the Disclosing Party by employees or contractors of the Receiving Party or any of its Affiliates without the aid, application or use of Confidential Information of the Disclosing Party.

11.2 Authorized Disclosure. The Receiving Party may disclose Confidential Information belonging to the Disclosing Party to the extent (and only to the extent) such disclosure is reasonably necessary in the following instances:

a) filing or prosecuting patents;

b) regulatory filings;

c) prosecuting or defending litigation;

d) subject to Section 11.4, complying with applicable governmental Laws and regulations (including the rules and regulations of the Securities and Exchange Commission or any national securities exchange) and with judicial process, if in the reasonable opinion of the Receiving Party's counsel, such disclosure is necessary for such compliance; and

e) disclosure (i) in connection with the performance of this Agreement and solely on a "need to know basis" to Affiliates, potential or actual collaborators (including potential Sublicensees) or employees, contractors or agents; or (ii) solely on a "need to know basis" to potential or actual investment bankers, investors, lenders, or acquirers; each of whom in the case of clause (i) or (ii) prior to disclosure must be bound by written obligations of confidentiality and non-use no less restrictive than the obligations set forth in this Article 11; *provided*, *however*, that the Receiving Party shall remain responsible for any failure by any Person who receives Confidential Information pursuant to this Article 11 to treat such Confidential Information as required under this Article 11.

If and whenever any Confidential Information is disclosed in accordance with this Section 11.2, such disclosure shall not cause any such information to cease to be Confidential Information except to the extent that such disclosure results in a public disclosure of such information (otherwise than by breach of this Agreement). Where reasonably possible and subject to Section 11.4, the Receiving Party shall notify the Disclosing Party of the Receiving Party's intent to make such disclosure pursuant to paragraphs (r) through (v) of this Section 11.2 sufficiently prior to making such disclosure so as to allow the Disclosing Party adequate time to take whatever action it may deem appropriate to protect the confidentiality of the information.

11.3 Terms of this Agreement. The Parties acknowledge that the terms of this Agreement shall be treated as Confidential Information of both Parties.

11.4 Securities Filings. In the event either Party proposes to file with the Securities and Exchange Commission or the securities regulators of any state or other jurisdiction a registration statement or any other disclosure document which describes or refers to this Agreement under the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, or any other applicable Laws, the Party shall notify the other Party of such intention and shall provide such other Party with a copy of relevant portions of the proposed filing not less than [***]*** business days prior to such filing (and any revisions to such portions of the proposed filing a reasonable time prior to the filing thereof), including any exhibits thereto relating to this Agreement and shall use reasonable efforts to obtain confidential treatment of any information concerning this Agreement that such other Party requests be kept confidential and shall only disclose Confidential Information which it is advised by counsel is legally required to be disclosed. No such notice shall be required under this Section 11.4 if the substance of the description of or reference to this Agreement contained in the proposed filing has been included in any previous filing made by the other Party hereunder or otherwise approved by the other Party.

11.5 Publication.

11.5.1 Publication by Ligand. Ligand may publish or present data and/or results relating to a Licensed Compound or Licensed Product in scientific journals and/or at scientific conferences, subject to the prior review, comment and approval by Retrophin as follows. Ligand shall provide Retrophin with the opportunity to review any proposed abstract, manuscript or presentation which discloses information relating to a Licensed Compound or Licensed Product by delivering a copy thereof to Retrophin no less than **[***]** days before its intended submission for publication or presentation. Retrophin shall have twenty (20) days from its receipt of any such abstract, manuscript or presentation in which to notify Ligand in writing of any specific objections to the disclosure. In the event Retrophin objects to the disclosure in writing within such **[***]** day period, Ligand agrees not to submit the publication or abstract or make the presentation containing the objected-to information until the Parties have agreed to the content of the proposed disclosure and Ligand shall delete from the proposed disclosure any Retrophin Confidential Information or Know-How or the identity of any Licensed Compound or Licensed Product, or any information relating to the Licensed Compound or its improvements that could limit or jeopardize any rights of Retrophin, upon reasonable request by Retrophin. Failure to object to the disclosure in writing within such **[***]** day period shall be deemed approval. Once any such abstract or manuscript is accepted for publication, Ligand will provide Retrophin with a copy of the final version of the manuscript or abstract. For clarification, this Section 11.5.1 shall not limit or restrict Ligand's ability to publish or present publicly information on compounds which are not Licensed Compounds or Licensed Products, provided such publication or presentation does not contain Retrophin Confidential Information or identify any Licensed Compound or Licensed Product. Retrophin acknowledges BMS' right to publish or otherwise publicly disclose any licensed BMS Know-How at any time.

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11.5.2 Publication by Retrophin. Retrophin may publish or present data and/or results relating to a Licensed Compound or Licensed Product in scientific journals and/or at scientific conferences, subject to attribution to Ligand of any data generated by or on behalf of Ligand prior to the Effective Date as well as the prior review and comment by Ligand as follows. Retrophin shall provide Ligand with the opportunity to review any proposed abstract, manuscript or presentation which discloses information relating to a Licensed Compound or Licensed Product by delivering a copy thereof to Ligand no less than [***]*** days before its intended submission for publication or presentation. Ligand shall have **[***]** days from its receipt of any such abstract, manuscript or presentation in which to notify Retrophin in writing of any specific objections to the disclosure, such objections to be limited to matters involving the disclosure of Ligand Confidential Information, or a good faith and documented concern by Ligand that such publication would otherwise result in material commercial harm to Ligand. In the event Ligand objects to the disclosure in writing within such **[***]** day period, Retrophin agrees not to submit the publication or abstract or make the presentation containing the objected-to information until the Parties have agreed to the content of the proposed disclosure, and Retrophin shall delete from the proposed disclosure any Ligand Confidential Information upon the reasonable request by Ligand. The Parties agree to take all reasonable steps to address and resolve a notice of objection by Ligand within **[***]** days of receipt of such notice. Once any such abstract or manuscript is accepted for publication, Retrophin will provide Ligand with a copy of the final version of the manuscript or abstract, a copy of which may be provided to BMS by Ligand.

ARTICLE 12.
INDEMNITY

12.1 Retrophin Indemnity. Retrophin shall indemnify, defend and hold harmless Ligand and its Affiliates, and their respective officers, directors, employees, agents, licensors, and their respective successors, heirs and assigns and representatives, from and against any and all claims, damages, losses, suits, proceedings, liabilities, costs (including reasonable legal expenses, costs of litigation and reasonable attorney's fees) or judgments, whether for money or equitable relief, of any kind, arising out of any claim, action, lawsuit or other proceeding brought by a Third Party ("Losses and Claims") arising out of or relating, directly or indirectly, (i) to the research, Development, Commercialization (including promotion, advertising, offering for sale, sale or other disposition), transfer, importation or exportation, manufacture, labeling, handling or storage, or use of, or exposure to, any Licensed Compound and/or any Licensed Product by or for Retrophin or any of its Affiliates, Sublicensees, agents and/or contractors, (ii) to Retrophin's (or its Affiliates' and/or Sublicensees') use and practice otherwise of the Patent Rights or Know-How, including claims based on (A) product liability, bodily injury, risk of bodily injury, death or property damage, (B) infringement or misappropriation of Third Party patents, copyrights, trademarks or other intellectual property rights or (C) the failure to comply with applicable Laws related to the matters referred to in the foregoing clauses (i) and (ii) with respect to any Licensed Compound and/or any Licensed

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Product, or (iii) Retrophin's gross negligence, recklessness or willful misconduct or Retrophin's material breach of any representation, warranty or covenant set forth in this Agreement; except in any such case for Losses and Claims to the extent reasonably attributable to Ligand having committed an act or acts of gross negligence, recklessness or willful misconduct or having materially breached any representation or warranty set forth in this Agreement.

12.2 Ligand Indemnity. Ligand shall indemnify, defend and hold harmless Retrophin and its Affiliates, and their respective officers, directors, employees, agents, licensors, and their respective successors, heirs and assigns and representatives, from and against any and all Losses and Claims arising out of or relating, directly or indirectly to (i) Ligand's gross negligence, recklessness or willful misconduct or (ii) Ligand's material breach of any representation, warranty or covenant set forth in this Agreement; except in any such case for Losses and Claims to the extent reasonably attributable to Retrophin having committed an act or acts of gross negligence, recklessness or willful misconduct or having materially breached any representation or warranty set forth in this Agreement. For the avoidance of doubt, "Ligand's gross negligence, recklessness or willful misconduct" shall not include any acts or omissions on the part of any Third Parties, including Ligand's clinical research organization, Cetero Research.

12.3 Indemnification Procedure. A claim to which indemnification applies under Section 12.1 or Section 12.2 shall be referred to herein as an "Indemnification Claim". If any Person or Persons (collectively, the "Indemnitee") intends to claim indemnification under this Article 12, the Indemnitee shall notify the other Party (the "Indemnitor") in writing promptly upon becoming aware of any claim that may be an Indemnification Claim (it being understood and agreed, however, that the failure by an Indemnitee to give such notice shall not relieve the Indemnitor of its indemnification obligation under this Agreement except and only to the extent that the Indemnitor is actually prejudiced as a result of such failure to give notice). The Indemnitor shall have the right to assume and control the defense of the Indemnification Claim at its own expense with counsel selected by the Indemnitor and reasonably acceptable to the Indemnitee; *provided*, *however*, that an Indemnitee shall have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnitee, if representation of such Indemnitee by the counsel retained by the Indemnitor would be inappropriate due to actual or potential differing interests between such Indemnitee and any other party represented by such counsel in such proceedings. If the Indemnitor does not assume the defense of the Indemnification Claim as aforesaid, the Indemnitee may defend the Indemnification Claim but shall have no obligation to do so. The Indemnitee shall not settle or compromise the Indemnification Claim without the prior written consent of the Indemnitor, and the Indemnitor shall not settle or compromise the Indemnification Claim in any manner which would have an adverse effect on the Indemnitee's interests (including any rights under this Agreement or the scope or enforceability of the Patents Rights or Know-How), without the prior written consent of the Indemnitee, which consent, in each case, shall not be unreasonably withheld or delayed. The Indemnitee shall reasonably cooperate with the Indemnitor at the Indemnitor's expense and shall make available to the Indemnitor all pertinent information under the control of the Indemnitee, which information shall be subject to Article 11.

12.4 Insurance. Retrophin shall, beginning with the initiation of the first clinical trial for a Licensed Product, maintain at all times thereafter during the term of the

Agreement, and until the later of (i) **[***]*** or (ii) the date **[***]**, comprehensive general liability insurance from a recognized, creditworthy insurance company, on a claims-made basis, with endorsements for contractual liability and product liability, and with coverage limits of not less than **[***]**. The minimum level of insurance set forth herein shall not be construed to create a limit on Retrophin's liability hereunder. Within **[***]** days following written request from Ligand, Retrophin shall furnish to Ligand a certificate of insurance evidencing such coverage as of the date. Retrophin shall use commercially reasonable efforts to cause such certificate of insurance, as well as any certificates evidencing new coverages of Retrophin, to include a provision whereby **[***]** written notice shall be received by Ligand prior to coverage cancellation by either Retrophin or the insurer and of any new coverage. In the case of a cancellation of such coverage, Retrophin shall promptly provide Ligand with a new certificate of insurance evidencing that Retrophin's coverage meets the requirements in the first sentence of this Section 12.4.

ARTICLE 13.
TERM AND TERMINATION

13.1 Term. This Agreement shall commence as of the Effective Date and, unless sooner terminated in accordance with the terms hereof or by mutual written consent, shall continue until neither Party has any obligation under this Agreement to make payments to the other Party.

13.2 Termination By Ligand.

13.2.1 Insolvency. Ligand shall have the right to terminate this Agreement with respect to any or all licenses granted to Retrophin pursuant to Article 2 of this Agreement, at Ligand's sole discretion, upon delivery of written notice to Retrophin upon the filing by Retrophin in any court or agency pursuant to any statute or regulation of the United States or any other jurisdiction a petition in bankruptcy or insolvency or for reorganization or similar arrangement for the benefit of creditors or for the appointment of a receiver or trustee of Retrophin or its assets, or if Retrophin is served with an involuntary petition against it in any insolvency proceeding, upon the **[***]** day after such service if such involuntary petition has not previously been stayed or dismissed, or upon the making by Retrophin of an assignment of substantially all of its assets for the benefit of its creditors.

13.2.2 Breach. Subject to Section 13.2.4 below, Ligand shall have the right to terminate this Agreement with respect to any or all licenses granted to Retrophin pursuant to Article 2 of this Agreement, at Ligand's sole discretion, upon delivery of written notice to Retrophin in the event of any material breach by Retrophin of any terms and conditions of this Agreement (other than failure to use Commercially Reasonable Efforts to Develop or Commercialize the Licensed Compounds and a Licensed Product, which breach is covered under Section 13.2.3); *provided, however,* such breach has not been cured within

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forty-five (45) days after written notice thereof is given by Ligand to Retrophin specifying the nature of the alleged breach; *provided*, *however*, that to the extent such material breach involves the failure to make a payment when due, such breach must be cured within twenty (20) days after written notice thereof is given by Ligand to Retrophin.

13.2.3 Failure to Use Commercially Reasonable Efforts. Subject to Section 13.2.4 below, Ligand shall have the right to terminate this Agreement with respect to any or all licenses granted to Retrophin pursuant to Article 2 of this Agreement on a country-by-country basis (except as otherwise set forth in this Section 13.2.3), at Ligand's sole discretion, in the event that Retrophin (a) fails to use Commercially Reasonable Efforts (by itself or through its Affiliates or Sublicensees) to Develop and Commercialize at least one (1) Licensed Compound and Licensed Product or (b) fails to comply with the specific diligence obligations set forth in Sections 6.1.2 and 6.1.3 of this Agreement; *provided, however,* that Retrophin has not exercised such Commercially Reasonable Efforts or complied with such specific diligence obligations in the applicable country or countries within sixty (60) days following written notice by Ligand. For clarity, it is understood and acknowledged that Commercially Reasonable Efforts in the Development of a Licensed Compound or Licensed Product in a particular country may include sequential implementation of clinical trials and/or intervals between clinical trials for data interpretation and clinical program planning and any period associated with such program, to the extent such implementation is consistent with the scientific, technical and commercial factors relevant to Development of such Licensed Compound or Licensed Product in such country.

13.2.4 Disputed Breach. If Retrophin disputes in good faith the existence or materiality of a breach specified in a notice provided by Ligand pursuant to Section 13.2.2, or a failure to use Commercially Reasonable Efforts specified in a notice provided by Ligand pursuant to Section 13.2.3, and Retrophin provides notice to Ligand of such dispute within the applicable forty-five (45) day or sixty (60) day period, Ligand shall not have the right to terminate this Agreement unless and until the existence of such material breach or failure by Retrophin has been determined in accordance with Article 14 and Retrophin fails to cure such breach within sixty (60) days following such determination (except to the extent such breach involves the failure to make a payment when due, which breach must be cured within five (5) Business Days following such determination). It is understood and acknowledged that during the pendency of such a dispute, all of the terms and conditions of this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder. The Parties further agree that any payments that are made by one Party to the other Party pursuant to this Agreement pending resolution of the dispute shall be promptly refunded if an arbitrator or court determines pursuant to Article 14 that such payments are to be refunded by one Party to the other Party.

13.2.5 Termination for **[*******]*****. Subject to the terms of this Section 13.2.5, Ligand shall have the right to terminate this Agreement (on a country-by-country or worldwide

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basis, as Ligand may elect), **[***]**, in the event that (a) **[***]** or (b) **[***]**. In the event the Parties are unable to reach agreement regarding whether or not a compound is a **[***]**, and the Parties have not resolved such dispute through good faith discussions, such dispute will be resolved through performance of the relevant scientific determination by an independent Third Party testing provider or other scientific expert who shall be mutually and reasonably selected by both Parties. The findings of such Third Party scientific expert with respect to such dispute shall be binding on the Parties, and the costs of such testing shall be borne by the Party whom the independent determination does not favor.

13.2.6 Termination of Upstream License Agreement. Subject to Section 13.5.1, if the Upstream License Agreement, in whole or in part, is terminated for any reason, the corresponding rights granted to Retrophin shall be terminated effective upon termination of the Upstream License Agreement.

13.3 Termination by Retrophin. Retrophin may terminate this Agreement in the event of material breach by Ligand; *provided, however,* that such breach has not been cured within sixty (60) days after written notice thereof is given by Retrophin to Ligand. Notwithstanding the foregoing, if Ligand disputes in good faith the existence or materiality of such breach and provides notice to Retrophin of such dispute within such sixty (60) day period, Retrophin shall not have the right to terminate this Agreement in accordance with this Section 13.3 unless and until it has been determined in accordance with Article 14 that this Agreement was materially breached by Ligand and Ligand fails to cure such breach within sixty (60) days following such determination. It is understood and acknowledged that during the pendency of such a dispute, all of the terms and conditions of this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder. The Parties further agree that any payments that are made by one Party to the other Party pursuant to this Agreement pending resolution of the dispute shall be promptly refunded if an arbitrator or court determines pursuant to Article 14 that such payments are to be refunded by one Party to the other Party.

13.4 Effect of Termination. Upon termination of this Agreement or any right or license pursuant to Section 13.2.1, 13.2.2, 13.2.3 or 13.2.5, the rights and obligations of the Parties shall be as set forth in this Section 13.4.

13.4.1 Upon termination of this Agreement, either in its entirety or with respect to one or more applicable countries (each, a "Terminated Country") pursuant to Section 13.2.1, 13.2.2, 13.2.3 or 13.2.5 hereof (the rights and obligations of the Parties as to the remaining countries of the Territory in which termination under Section 13.2.3 or 13.2.5 has not occurred, being unaffected by such termination), the following shall apply:

a) **[***]**.

b) **[***]***.

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c) All amounts due or payable to **[***]** shall remain due and payable.

d) Should Retrophin have **[***]**, Retrophin shall **[***]**.

e) Should Retrophin have **[***]**.

f) Retrophin shall **[***]**.

g) If Retrophin has the **[***]**.

h) Retrophin shall **[***]**.

i) Retrophin shall **[***]**.

j) Retrophin hereby**[***]**.

k) Neither Party shall be relieved of any obligation that accrued prior to the effective date of such termination or expiration.

l) Each Party shall have the right to retain all amounts previously paid to it by the other Party, subject to any applicable determination of an arbitrator or court pursuant to Article 14.

m) It is understood and agreed that Ligand shall be entitled to **[***]** as a remedy to enforce the provisions of this Section 13.4, in addition to any other remedy to which it may be entitled by applicable Law.

13.5 Termination by BMS.

13.5.1 Any rights granted by Ligand pursuant to this Agreement shall terminate on a country-by-country and Licensed Product-by-Licensed Product basis effective upon termination under Section 13.2 of the Upstream License Agreement with respect to such sublicensed rights; *provided, however,* that such sublicensed rights shall not terminate if, as of the effective date of such termination by BMS under Section 13.2 of the Upstream License Agreement, Retrophin is not in material breach of its obligations to Ligand under this Agreement, and within sixty (60) days of such termination Retrophin agrees in writing to be bound directly to BMS under a license agreement substantially similar to this Agreement with respect to the rights sublicensed hereunder, substituting Retrophin for Ligand.

13.5.2 BMS may terminate the Upstream License Agreement where (a) Retrophin or its Affiliate (alone or in collaboration with a Third Party) undertakes the clinical development of a product that contains a **[***]*** prior to the first U.S. NDA Approval being obtained for a Licensed Compound or (b) Retrophin or its Affiliate (alone or in collaboration with a Third

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Party) markets a product that contains a **[***]** within **[***]** years following the first U.S. NDA Approval for a Licensed Product.

13.6 Scope of Termination. Except as otherwise expressly provided herein, termination of this Agreement shall be as to all countries in the Territory and all Licensed Compounds and Licensed Products.

(i) Survival. The following provisions shall survive termination or expiration of this Agreement, as well as any other provision which by its terms or by the context thereof, is intended to survive such termination: Article 1 (as applicable), Article 5 (with respect to obligations arising prior to expiration or termination of this Agreement), Article 8 (with respect to obligations arising prior to expiration or termination of this Agreement), Section 9.4, Section 9.5, Section 10.1, 10.4.4 (with respect to an action, suit or proceeding commenced prior to termination), Section 10.7, Article 11, Article 12 (with respect to Losses and Claims arising from activities and breaches that take place prior to expiration or termination of this Agreement), this Section 13.6(i), Section 13.7, Article 14 and Article 15. Termination or expiration of this Agreement shall not relieve the Parties of any liability or obligation which accrued hereunder prior to the effective date of such termination or expiration nor preclude either Party from pursuing all rights and remedies it may have hereunder or at law or in equity, subject to Article 14, with respect to any breach of this Agreement nor prejudice either Party's right to obtain performance of any obligation. All other obligations shall terminate upon expiration of this Agreement.

13.7 Bankruptcy. The Parties agree that in the event a Party becomes a debtor under Title 11 of the U.S. Code ("Title 11"), this Agreement shall be deemed to be, for purposes of Section 365(n) of Title 11, a license to rights to "intellectual property" as defined therein. Each Party as a licensee hereunder shall have the rights and elections as specified in Title 11. Any agreements supplemental hereto shall be deemed to be "agreements supplementary to" this Agreement for purposes of Section 365(n) of Title 11.

ARTICLE 14.
DISPUTE RESOLUTION; ARBITRATION

14.1 Dispute Resolution. The Parties agree that the procedures set forth in this Section 14.1 shall be the exclusive mechanism for resolving any bona fide disputes, controversies or claims (collectively, "Disputes") between the Parties that arise from time to time pursuant to this Agreement relating to any Party's rights and/or obligations hereunder that cannot be resolved through good faith negotiation between the Parties.

14.2 Executive Mediation. Any Dispute shall first be referred to an Executive from each Party for attempted resolution by good faith negotiations. Any such Dispute shall be submitted to such Executives no later than **[***]*** days following such request by either Party.

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Such Executives shall attempt in good faith to resolve any such Dispute within **[***]** days after submission of the Dispute. In the event the Executives are unable to resolve the Dispute, the Parties shall otherwise negotiate in good faith and use reasonable efforts to settle.

14.3 Arbitration.

14.3.1 If the Parties are not able to fully settle a Dispute pursuant to Section 14.2 above, and a Party wishes to pursue the matter, each such Dispute that is not an Excluded Claim or subject to expedited arbitration in accordance with Section 14.4 below, shall be finally resolved by binding arbitration in accordance with the Commercial Arbitration Rules and Supplementary Procedures for Large Complex Disputes of the American Arbitration Association ("AAA"), and judgment on the arbitration award may be entered in any court having jurisdiction thereof; provided, however, that the Federal Rules of Evidence shall apply with regard to the admissibility of evidence in such hearing.

14.3.2 The arbitration shall be conducted by a panel of three persons experienced in the pre-clinical and clinical stage pharmaceutical business. Within **[***]** days after initiation of arbitration, each Party shall select one person to act as arbitrator and the two Party-selected arbitrators shall select a third arbitrator within **[***]*** days of their appointment. If the arbitrators selected by the Parties are unable or fail to agree upon the third arbitrator, the third arbitrator shall be appointed by the AAA. In any case the arbitrator shall not be an Affiliate, employee, consultant, officer, director or stockholder of either Party, or otherwise have any current or previous relationship with either Party or their respective Affiliates. The Parties shall have the right to be represented by counsel. The place of arbitration shall be New York, NY. All proceedings and communications shall be in English.

14.3.3 Either Party may apply to the arbitrators for interim injunctive relief until the arbitration award is rendered or the controversy is otherwise resolved. Either Party also may, without waiving any remedy under this Agreement, seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that Party pending the arbitration award. The arbitrators shall have no authority to award punitive or any other type of damages not measured by a Party's compensatory damages. Each Party shall bear its own costs and expenses and attorneys' fees and an equal share of the arbitrators' fees and any administrative fees of arbitration.

14.3.4 Except to the extent necessary to confirm an award or as may be required by Law, neither a Party nor an arbitrator may disclose the existence, content, or results of an arbitration without the prior written consent of both Parties. In no event shall an arbitration be initiated after the date when commencement of a legal or equitable proceeding based on the dispute, controversy or claim would be barred by the applicable New York statute of limitations.

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14.3.5 The arbitrators shall use their commercially reasonable efforts to rule on each disputed issue within days after completion of the hearing described in Section 14.3. The determination of the arbitrators as to the resolution of any dispute shall be binding and conclusive upon all Parties. All rulings of the arbitrator shall be in writing and shall be delivered to the Parties except to the extent that the Commercial Arbitration Rules of the AAA provide otherwise. Nothing contained herein shall be construed to permit the arbitrator to award punitive, exemplary or any similar damages.

14.3.6 The (i) attorneys' fees of the Parties in any arbitration, (ii) fees of the arbitrator and (iii) costs and expenses of the arbitration shall be borne by the Parties in a proportion determined by the arbitrator.

14.3.7 For all Excluded Claims, the Parties hereby submit to the exclusive jurisdiction of the Supreme Court of the State of New York, New York County and the United States District Court for the Southern District of New York. For clarity, each party may seek injunctive or other equitable relief for Excluded Claims in accordance with this Section 14.3.7. Each Party agrees that service of any process, summons, notice or document by personal delivery, by registered mail, or by a recognized international express delivery service to such Party's respective address set forth in Section 15.2 shall be effective service of process for any action, suit or proceeding in the district court or state court with respect to any matters to which it has submitted to jurisdiction in this Section 14.3.7. Each Party irrevocably and unconditionally waives any objection to the laying of venue of any action, suit or proceeding arising out of this Agreement or the transactions contemplated hereby in the district court or state court, and hereby and thereby further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum. Each Party hereto also hereby waives to the fullest extent permitted by applicable Laws, any right it may have to a trial by jury in respect to any litigation directly or indirectly arising out of, under or in connection with this Agreement. Each Party hereto (i) certifies that no representative, agent or attorney of the other Party has represented, expressly or otherwise, that such other Party would not, in the event of litigation, seek to enforce that foregoing waiver and (ii) acknowledges that it and the other Party hereto have been induced to enter into this Agreement, as applicable, by, among other things, the mutual waivers and certifications in this Section 14.3.7.

14.4 Expedited Arbitration. The Parties agree that it is important to be able to clarify any disputes regarding **[***]*** quickly. Accordingly, if: (i) Ligand **[***]**; (ii) **[***]**; or (iii) **[***]**; then the Parties shall resolve such dispute in accordance with this Section 14.4. Arbitration under this Section 14.4 shall be conducted in the same manner and subject to the same terms and conditions as arbitration under Section 14.3, provided that: (i) the Parties shall designate in writing a single arbitrator within fifteen (15) days of written notice of the dispute; (ii) the arbitrator and the Parties shall meet, and each Party shall provide to the arbitrator a written summary of all disputed issues, such Party's position on such disputed issues and such

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Party's proposed ruling on the merits of each such issue within fifteen (15) days after the designation of the arbitrator; (iii) the arbitrator shall use his or her commercially reasonable efforts to rule on each disputed issue within fifteen (15) days after completion of the hearing described in Section 14.3; (d) the arbitrator shall select one of the requested positions as his decision, and shall not have the authority to render any substantive decision other than to so select the position of either Ligand or Retrophin; and (e) the Parties shall use good faith efforts to complete any expedited arbitration pursuant to this Section 14.4 promptly.

ARTICLE 15.
MISCELLANEOUS

15.1 Severability. If any one or more of the provisions of this Agreement is held to be invalid or unenforceable, the provision shall be considered severed from this Agreement and shall not serve to invalidate any remaining provisions hereof. The Parties shall make a good faith effort to replace any invalid or unenforceable provision with a valid and enforceable one such that the objectives contemplated by the Parties when entering this Agreement may be realized.

15.2 Notices. Any notice required or permitted to be given by this Agreement shall be in writing and shall be delivered by hand or overnight courier with tracking capabilities or mailed postage prepaid by first class, registered or certified mail addressed as set forth below unless changed by notice so given:

If to Ligand:

Ligand Pharmaceuticals Incorporated
11085 North Torrey Pines Road, Suite 300
La Jolla, CA 92037
Attention: General Counsel

With a copy to (which shall not constitute notice hereunder):

Latham & Watkins LLP
12636 High Bluff Drive, Suite 400
San Diego, CA 92130
Attention: Faye H. Russell, Esq.

If to Retrophin:

Retrophin LLC
330 Madison Avenue, 6th Floor
New York, NY 10017
Attention: Martin Shkreli

With a copy to (which shall not constitute notice hereunder):

Katten Muchin Rosenman LLP

575 Madison Avenue
New York, NY 10022
Attention: Evan L. Greebel, Esq.

Any such notice shall be deemed given on the date received. A Party may add, delete, or change the person or address to whom notices should be sent at any time upon written notice delivered to the Party's notices in accordance with this Section 15.2.

15.3 Force Majeure. Neither Party shall be liable for delay or failure in the performance of any of its obligations hereunder (including, without limitation Sections 6.1.2 and 6.1.3 of this Agreement) if such delay or failure is due to causes beyond its reasonable control, including acts of God, fires, earthquakes, strikes and labor disputes, acts of war, terrorism, civil unrest or intervention of any governmental authority ("Force Majeure"); *provided*, *however*, that the affected Party promptly notifies the other Party and further provided that the affected Party shall use its commercially reasonable efforts to avoid or remove such causes of non-performance and to mitigate the effect of such occurrence and shall continue performance with the utmost dispatch whenever such causes are removed. When such circumstances arise, the Parties shall negotiate in good faith any modifications of the terms of this Agreement that may be necessary or appropriate in order to arrive at an equitable solution.

15.4 Assignment.

15.4.1 Ligand may, without Retrophin's consent, assign or transfer all of its rights and obligations hereunder, in connection with any transfer of all of the Patent Rights and Know-How, to any Affiliate of Ligand or to any Third Party (including a successor in interest); *provided*, *however*, that such assignee or transferee agrees in writing to be bound by the terms of this Agreement.

15.4.2 Retrophin may assign or transfer all of its rights and obligations hereunder without consent to an Affiliate of Retrophin or to a successor in interest by reason of merger, consolidation or sale of all or substantially all of the assets of Retrophin; *provided however*, that (i) Retrophin's rights and obligations under this Agreement shall be assumed by its successor in interest and shall not be transferred separate from all or substantially all of its other business assets, (ii) such assignment includes all Approvals and all rights and obligations under this Agreement, (iii) such successor in interest or Affiliate shall have agreed prior to such assignment or transfer to be bound by the terms of this Agreement in writing and (iv) where this Agreement is assigned or transferred to an Affiliate, Retrophin remains responsible for the performance of this Agreement.

15.4.3 Subject to the foregoing, this Agreement shall inure to the benefit of and be binding on the Parties' successors and assigns. Any assignment or transfer in violation of the foregoing shall be null and void and wholly invalid, the assignee or transferee in any such assignment or transfer shall acquire no rights whatsoever, and the non-assigning non-transferring Party shall not recognize, nor shall it be required to recognize, such assignment or transfer.

15.5 Further Assurances. Each Party agrees to do and perform all such further acts and things and shall execute and deliver such other agreements, certificates, instruments and documents necessary or that the other Party may deem advisable in order to carry out the intent and accomplish the purposes of this Agreement and to evidence, perfect or otherwise confirm its rights hereunder.

15.6 Waivers and Modifications. The failure of any Party to insist on the performance of any obligation hereunder shall not be deemed to be a waiver of such obligation. Waiver of any breach of any provision hereof shall not be deemed to be a waiver of any other breach of such provision or any other provision on such occasion or any succeeding occasion. No waiver, modification, release or amendment of any obligation under or provision of this Agreement shall be valid or effective unless in writing and signed by all Parties hereto.

15.7 Choice of Law. This Agreement shall be governed by, enforced, and shall be construed in accordance with the laws of the State of New York without regard to its conflicts of law provisions.

15.8 Publicity. The Parties agree to issue a press release regarding the execution of this Agreement, in a form to be mutually agreed upon by the Parties. Subject to the provisions of Sections 11.2, 11.4 and 11.5, each Party agrees not to issue any other press release or public statement disclosing the existence of this Agreement or any other information relating to this Agreement, the other Party, or the transactions contemplated hereby without the prior written consent of the other Party; *provided*, *however*, that any disclosure which is required by applicable Laws or the rules of a securities exchange, as reasonably advised by the disclosing Party's counsel, may be made subject to the following. The Parties agree that any such required disclosure will not contain confidential business or technical information and, if disclosure of confidential business or technical information is required by applicable Laws, the Parties will use appropriate diligent efforts to minimize such disclosure and obtain confidential treatment for any such information which is disclosed to a governmental agency. Each Party agrees to provide to the other Party a copy of any public announcement regarding this Agreement or the subject matter thereof as soon as reasonably practicable under the circumstances prior to its scheduled release. Except under extraordinary circumstances, or as otherwise required under applicable Laws or the rules of a securities exchange, each Party shall provide the other with an advance copy of any such announcement at least forty eight (48) hours prior to its scheduled release. Each Party shall have the right to expeditiously review and recommend changes to any such announcement and, except as otherwise required by applicable Laws or the rules of a securities exchange, the Party whose announcement has been reviewed shall remove any Confidential Information of the reviewing Party that the reviewing Party reasonably deems to be inappropriate for disclosure. The contents of any announcement or similar publicity which has been reviewed and approved by the reviewing Party can be re-released by either Party without a requirement for re-approval. Nothing in this Section 15.8 shall be construed to prohibit Retrophin or its Affiliates or Sublicensees from making a public announcement or disclosure regarding the stage of development of Licensed Products in Retrophin's (or its Affiliates' or Sublicensees') product pipeline or disclosing clinical trial results regarding such Licensed Products, as may be required by applicable Laws or the rules of a securities exchange, as reasonably advised by Retrophin's (or its Affiliates' or Sublicensees') counsel.

15.9 Relationship of the Parties. Each Party is an independent contractor under this Agreement. Nothing contained herein is intended or is to be construed so as to constitute Ligand and Retrophin as partners, agents or joint venturers. Neither Party shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of the other Party or to bind the other Party to any contract, agreement or undertaking with any Third Party.

15.10 Headings. Headings and captions are for convenience only and are not be used in the interpretation of this Agreement.

15.11 Entire Agreement. This Agreement (including all Appendices attached hereto, which are incorporated herein by reference) (i) sets forth all of the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto, (ii) constitutes and contains the complete, final and exclusive understanding and agreement of the Parties with respect to the subject matter herein and (iii) cancels, supersedes and terminates all prior agreements and understanding between the Parties with respect to the subject matter hereof. For the avoidance of doubt, the confidentiality agreement entered into by Ligand and Retrophin effective as of December 11, 2011 (the "Confidentiality Agreement") shall remain in effect with respect to all Confidential Information (as that term is defined in the Confidentiality Agreement) disclosed by the Parties that does not pertain to the subject matter of this Agreement. All Confidential Information (as that term is defined in the Confidentiality Agreement) pertaining to the subject matter of this Agreement disclosed to Ligand by Retrophin under the Confidentiality Agreement shall be considered Confidential Information (as that term is defined in this Agreement) of Retrophin disclosed under this Agreement and shall be subject to the terms and conditions of this Agreement; and all Confidential Information (as that term is defined in the Confidentiality Agreement) pertaining to the subject matter of this Agreement disclosed to Retrophin by Ligand under the Confidentiality Agreement shall be considered Confidential Information (as that term is defined in this Agreement) of Ligand disclosed under this Agreement and shall be subject to the terms and conditions of this Agreement. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, whether oral or written, between the Parties other than as set forth herein. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties hereto unless reduced to writing and signed by the respective authorized officers of the Parties.

15.12 Counterparts. This Agreement may be executed in counter-parts with the same effect as if both Parties had signed the same document. All such counterparts shall be deemed an original, shall be construed together and shall constitute one and the same instrument.

15.13 Exports. Retrophin agrees not to export or re-export, directly or indirectly, any information, technical data, the direct product of such data, samples or equipment received or generated under this Agreement in violation of any applicable export control Laws.

15.14 Interpretation.

15.14.1 Each of the Parties acknowledges and agrees that this Agreement has been diligently reviewed by and negotiated by and between them, that in such negotiations each of them has been represented by competent counsel and that the final agreement contained

herein, including the language whereby it has been expressed, represents the joint efforts of the Parties hereto and their counsel. Accordingly, in interpreting this Agreement or any provision hereof, no presumption shall apply against any Party hereto as being responsible for the wording or drafting of this Agreement or any such provision, and ambiguities, if any, in this Agreement shall not be construed against any Party, irrespective of which Party may be deemed to have authored the ambiguous provision.

15.14.2 The definitions of the terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." The word "will" shall be construed to have the same meaning and effect as the word "shall." The word "any" shall mean "any and all" unless otherwise clearly indicated by context.

15.14.3 Unless the context requires otherwise, (a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein or therein), (b) any reference to any Laws herein shall be construed as referring to such Laws as from time to time enacted, repealed or amended, (c) any reference herein to any person shall be construed to include the person's successors and assigns, (d) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, and (e) all references herein to Articles, Sections or Appendices, unless otherwise specifically provided, shall be construed to refer to Articles, Sections and Appendices of this Agreement.

* * *

[signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized officers as of the date first set forth above.

LIGAND PHARMACEUTICALS INCORPORATED
("Ligand")

By: /s/ Charles Berkman
Name: Charles Berkman
Title: Vice President, General Counsel and Secretary

RETROPHIN, LLC

("Retrophin")

By: /s/ Martin Shkreli
Name: Martin Shkreli
Title: Chief Executive Officer

Appendix 1

Core Patent Rights

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

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Appendix 2

Active Compound

"Active Compound" means a compound that **[***]***.**

"**[***]**" means **[***]**.

"**[***]**" means the **[***]**.

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Appendix 3

Development Plan

(attached hereto)

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Appendix 4

Listed Compounds

[***]*

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

Exhibit 31.1

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

I, John L. Higgins, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: May 4, 2012

/s/ John L. Higgins
John L. Higgins
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

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

I, John P. Sharp, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: May 4, 2012

/s/ John P. Sharp
John P. Sharp
Vice President, Finance and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

In connection with the accompanying Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated (the "Company") for the quarter ended March 31, 2012, I, John L. Higgins, President, Chief Executive Officer and Director of the Company, hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) such Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in such Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is being furnished solely to accompany such Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Date: May 4, 2012

/s/ John L. Higgins
John L. Higgins
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 32.2

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

In connection with the accompanying Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated (the "Company") for the quarter ended March 31, 2012, I, John P. Sharp, Vice President, Finance and Chief Financial Officer of the Company, hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) such Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in such Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is being furnished solely to accompany such Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Date: May 4, 2012

/s/ John P. Sharp
John P. Sharp
Vice President, Finance and Chief Financial Officer
(Principal Financial Officer)