

LIGAND PHARMACEUTICALS INC

Form 10-K

March 03, 2011

Table of Contents

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

Mark One

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2010

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 No. 001-33093

**LIGAND PHARMACEUTICALS INCORPORATED**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**77-0160744**  
(IRS Employer  
Identification No.)

92037

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11085 North Torrey Pines Rd., Suite 300  
La Jolla, CA

(Address of Principal Executive Offices)

(Zip Code)

Registrant's telephone number, including area code: (858) 550-7500

Securities registered pursuant to Section 12(b) of the Act:

| Title of Each Class                      | Name of Each Exchange on Which Registered               |
|--|---|
| Common Stock, par value \$.001 per share | The NASDAQ Global Market of The NASDAQ Stock Market LLC |
| Preferred Share Purchase Rights          | The NASDAQ Global Market of The NASDAQ Stock Market LLC |

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934. Yes  No

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer or a smaller reporting company. See definition 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 Exchange Act Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the Registrant's voting and non-voting stock held by non-affiliates was approximately \$156.6 million based on the last sales price of the Registrant's Common Stock on the NASDAQ Global Market of the NASDAQ Stock Market LLC on June 30, 2010. For purposes of this calculation, shares of Common Stock held by directors, officers and 10% stockholders known to the Registrant have been deemed to be owned by affiliates which should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant or that such person is controlled by or under common control with the Registrant.

As of February 11, 2011, the Registrant had 19,621,289 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Registrant's 2011 Annual Meeting of Stockholders to be filed with the Commission on or before May 2, 2011 are incorporated by reference in Part III of this Annual Report on Form 10-K. With the exception of those portions that are specifically incorporated by reference in this Annual Report on Form 10-K, such Proxy Statement shall not be deemed filed as part of this Report or incorporated by reference herein.



**Table of Contents****Table of Contents**

|                        |  |     |
|------------------------|--|-----|
| <b>Part I</b>          |  |     |
| Item 1.                | <u>Business</u>  | 1   |
| Item 1A.               | <u>Risk Factors</u>  | 15  |
| Item 1B.               | <u>Unresolved Staff Comments</u>   | 29  |
| Item 2.                | <u>Properties</u>  | 29  |
| Item 3.                | <u>Legal Proceedings</u>   | 29  |
| Item 4.                | <u>Reserved</u>  | 29  |
| <b>Part II</b>         |  |     |
| Item 5.                | <u>Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities</u> | 30  |
| Item 6.                | <u>Selected Consolidated Financial Data</u>  | 33  |
| Item 7.                | <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>                         | 35  |
| Item 7A.               | <u>Quantitative and Qualitative Disclosures About Market Risk</u>  | 48  |
| Item 8.                | <u>Consolidated Financial Statements and Supplementary Data</u>  | 49  |
| Item 9.                | <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>                          | 90  |
| Item 9A.               | <u>Controls and Procedures</u>   | 90  |
| Item 9B.               | <u>Other Information</u>   | 92  |
| <b>Part III</b>        |  |     |
| Item 10.               | <u>Directors, Executive Officers and Corporate Governance</u>  | 92  |
| Item 11.               | <u>Executive Compensation</u>  | 92  |
| Item 12.               | <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>                | 92  |
| Item 13.               | <u>Certain Relationships and Related Transactions, and Director Independence</u>                                     | 92  |
| Item 14.               | <u>Principal Accountant Fees and Services</u>  | 92  |
| <b>Part IV</b>         |  |     |
| Item 15.               | <u>Exhibits and Financial Statement Schedules</u>  | 93  |
|                        | <u>SIGNATURES</u>  | 105 |
| AVAILABLE INFORMATION: |  |     |

We file electronically with the Securities and Exchange Commission (or SEC) our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and, as necessary, amendments to these reports, pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended. The public may read or copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is <http://www.sec.gov>.

You may obtain a free copy of our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports which are posted as soon as reasonably practicable after filing on our website at <http://www.ligand.com>, by contacting the Investor Relations Department at our corporate offices by calling (858) 550-7500 or by sending an e-mail message to [investors@ligand.com](mailto:investors@ligand.com). You may also request information via the Investor Relations page of our website.

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**Table of Contents**

**PART I**

**Item 1. Business**

*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 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, collaborative revenues and milestones, 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 or other revenues to support our ongoing business or that our internal or partnered pipeline products will progress in their development, gain marketing approval or achieve success in the market. In addition, future arbitration, 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 annual report. This caution is made under the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934, as amended.*

References to Ligand Pharmaceuticals Incorporated, Ligand, the Company, we or our include our wholly owned subsidiaries Ligand JVR, Allergan Ligand Retinoid Therapeutics, Seragen, Inc., or Seragen; Pharmacopeia, LLC; Neurogen Corporation, CyDex Pharmaceuticals, Inc., Metabasis Therapeutics, and Nexus Equity VI LLC, or Nexus.

We were incorporated in Delaware in 1987. Our principal executive offices are located at 11085 North Torrey Pines Road, Suite 300, La Jolla, California, 92037. Our telephone number is (858) 550-7500.

**Overview**

We are a biotechnology company 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 our business model is based on the goal of partnering with other pharmaceutical companies to commercialize and market our assets, the revenue that supports our business is based largely on payments made to us by partners for royalties, milestones, license fees and our material sales of Captisol®. We expect to receive revenue from eight partner-marketed products in 2011 and have a portfolio of over fifty additional programs that are in various stages of development with the potential to become future revenue generating assets. This portfolio of assets is highly diversified across numerous technology types, therapeutic areas, drug targets, and industry partners, offering investors a unique and, we believe, lower risk portfolio opportunity in which to invest in the increasingly complicated and unpredictable pharmaceutical industry. These programs address the unmet medical needs of patients for a broad spectrum of diseases including hepatitis, muscle wasting, Alzheimer's disease, dyslipidemia, diabetes, anemia, COPD, asthma, rheumatoid arthritis, oncology and osteoporosis. We have established multiple alliances with the world's leading pharmaceutical companies including GlaxoSmithKline, Merck, Pfizer, Bristol-Myers Squibb, Onyx and AstraZeneca.

**Business Strategy**

Our business model is designed to create value for stockholders by assembling a diversified portfolio of biotech and pharmaceutical revenue streams and operating that business with an efficient and low cost structure. Our goal is to become a sustainably profitable company that offers investors an opportunity to invest in the ever more complicated and unpredictable pharmaceutical industry. Our business model is based on the concept of

## **Table of Contents**

doing what we do best; drug discovery, reformulation and partnering with other pharmaceutical companies to leverage what they do best (late stage development, regulatory management and commercialization) to ultimately generate our revenue. Our revenue consists mostly of license fees, milestones, royalties, and Captisol material sales from the partners that license our drugs and technologies. In addition to discovering our own proprietary drugs, we use an aggressive acquisition strategy to bring in new assets, pipelines, and technologies to aid in generating additional potential new revenue streams. The principal elements of our strategy are set forth below.

***We are assembling a large portfolio of fully funded programs through acquisition and licensing to drive future profitability.*** We have assembled a portfolio of over fifty fully-funded partner programs that are in all stages of development, from awaiting commercialization to preclinical research. These assets represent the next wave of potential marketed drugs that could generate revenue for us. We assemble this portfolio by either licensing out our own proprietary drug development programs or acquiring in partnered programs from other companies. For our internal programs, we generally plan to advance drug candidates through early-stage drug development and/or clinical proof of concept. We believe partnerships are not only a source of research funding, license fees, future milestone payments and royalties, but they also deliver our assets into the hands of companies that have the expertise to obtain regulatory approval and successfully launch and commercialize these assets. We believe that focusing on discovery and early-stage drug development while benefiting from our partners' proven development and commercialization expertise will reduce our internal expenses and allow us to have a larger number of drug candidates progress to later stages of drug development. We have multiple sources of potential license and royalty revenue from existing corporate agreements, and we may enter additional partnerships that will provide additional revenue opportunities. We have numerous collaborations that have the potential to generate future royalties for us. We believe the revenue generated from these and future potential collaborations will fund our business and potentially provide profits to our shareholders.

***We are selling Captisol material to various customers.*** We are the sole provider of a proprietary formulation reagent known as Captisol. Captisol is a well validated chemically-modified cyclodextrin molecule that improves the solubility, stability, and pharmacokinetics of many drugs. We receive revenue from the selling of Captisol to our partners that have either licensed our proprietary Captisol-enabled drugs or have taken a license to use Captisol with their own internal programs.

***We discover and develop compounds that are promising drug candidates.*** We discover, synthesize and test numerous compounds to identify those that are most promising for clinical development. We perform extensive target profiling and base our selection of promising development candidates on product characteristics such as initial indications of safety and efficacy. We believe that this focused strategy allows us to eliminate unpromising candidates from consideration sooner without incurring substantial clinical costs. Our goal is to partner our programs early in the development and regulatory life-cycle.

## **Our Asset Portfolio**

We have a portfolio of over sixty current and future potential revenue generating programs. We expect to receive royalties from eight marketed products in 2011 and have multiple programs at Phase IIb through NDA submission (as illustrated below) which represent our future upcoming potential revenue generating programs. While many of these programs have been disclosed publicly, a significant number of our partners and their programs remain undisclosed to protect competitive and proprietary information about these programs.

**Table of Contents****Current Development Distribution of Our Asset Portfolio*****Promacta (GSK)***

In November 2008, the U.S. Food and Drug Administration, or FDA, granted accelerated approval of GSK's PROMACTA® (Eltrombopag) for the treatment of thrombocytopenia in patients with chronic immune (idiopathic) thrombocytopenic purpura, or ITP, who have had an insufficient response to corticosteroids, immunoglobulins or splenectomy. PROMACTA is also approved under the trade name Revolade(R) in Japan, Europe, Venezuela, Kuwait, Chile and Russia. PROMACTA is the first oral thrombopoietin, or TPO, receptor agonist therapy for the treatment of adult patients with chronic ITP. In March 2010, GSK received approval for Revolade (eltrombopag/PROMACTA) from the European Medicines Agency's Committee for Medicinal Products for Human Use (CHMP) and in November 2010 from the Japanese Ministry of Health, Labour and Welfare for the oral treatment of thrombocytopenia (reduced platelet count) in adults with the blood disorder chronic ITP. In the EU and Japan, Eltrombopag is indicated for adult chronic ITP splenectomized patients who have not responded (are refractory) to other treatments, such as corticosteroids and immunoglobulins. Eltrombopag may also be considered as second-line treatment for adult non-splenectomized patients where surgery is contraindicated. As a result of the regulatory approvals of PROMACTA, pursuant to the terms of a license agreement with GSK, we are entitled to receive tiered royalties on annual net sales of PROMACTA. GSK has listed a patent in the FDA's Orange Book for PROMACTA with an expiration date in 2024.

| <b>Rate</b> | <b>Promacta Royalty*</b> | <b>Tier</b>                                     |
|-------------|--------------------------|---|
| 4.7%        |                          | Less than \$100M annual sales                   |
| 6.6%        |                          | On portion of sales in range of \$100M - \$200M |
| 7.5%        |                          | On portion of sales in range of \$200M - \$400M |
| 9.4%        |                          | On portion of sales greater than \$400M         |
| 9.3%        |                          | On portion of sales greater than \$1.5B         |

\* Net royalties due Ligand after payment to Rockefeller

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**Table of Contents**

***AVINZA (Pfizer)***

We currently receive royalty revenues from King Pharmaceuticals for sales from the pain therapeutic AVINZA®. In February 2007, we completed the sale of our AVINZA product line to King. As a result of the sale, we receive royalties on the net sales of AVINZA through 2017. Royalties are paid at a rate of 5% on sales up to \$200 million and a higher rate above \$200 million. In October 2010, Pfizer announced the acquisition of King Pharmaceuticals. According to Pfizer, the transaction is expected to close in the first quarter of 2011.

***Viviant/Conbriza (Pfizer)***

In October 2010, we announced that our partner Pfizer, Inc. launched VIVIAN<sup>®</sup> (bazedoxifene) in Japan for the treatment of postmenopausal osteoporosis. The drug is also marketed in Spain under the brand name CONBRIZA<sup>(R)</sup> through a co-promotion with Almirall, an international pharmaceutical company based in Spain. Pfizer received manufacturing and marketing approval for the product in Japan in July 2010. VIVIAN<sup>®</sup> was approved in April 2009 by the European Commission (under the trade name CONBRIZA) for the treatment of postmenopausal osteoporosis in women at increased risk of fracture. VIVIAN<sup>®</sup>, a selective estrogen receptor modulator (SERM), is a result of the successful research collaboration between Wyeth (now a subsidiary of Pfizer) and us that began in 1994. Pfizer is responsible for the registration and worldwide marketing of bazedoxifene, a synthetic drug specifically designed to reduce the risk of osteoporotic fractures while also protecting uterine tissue. We are entitled to receive tiered royalties on net sales of bazedoxifene. Any such royalties may be subject to reduction or offset for past milestone payments and/or may be subject to other terms and conditions set forth in our agreement.

***Abilify IM (BMS)***

CyDex Pharmaceuticals, Inc., or CyDex, and BMS entered into license and supply agreements on July 1, 1998 to use Captisol in development and commercialization of an oncology product. This agreement was later amended to permit BMS to use Captisol with a second undisclosed drug candidate on March 30, 2000. This second drug, Abilify<sup>®</sup>, was approved in 2006 and CyDex has received a license fee, two milestone payments, revenues from material sales and royalties in conjunction with the development and subsequent sales of Abilify.

***VFEND, Geodon and Cerenia (Pfizer)***

CyDex currently receives royalties from Pfizer for three marketed drugs, VFEND<sup>®</sup> I.V. for Injection (antifungal), Geodon<sup>®</sup> injection for intramuscular use (antipsychotic) and Cerenia Injectable Solution (canine nausea). Pfizer was the first pharmaceutical company to license the Captisol Technology from CyDex. The set of agreements with Pfizer include an option agreement originally signed in 1993 that provided Pfizer rights to the use of SBE-CD for antifungal indications and other Pfizer products. In December 2001, the companies amended their agreement to allow Pfizer to use SBE-CD in animal health products, which allowed for the development and commercialization of Cerenia Injectable Solution. In 2002, Pfizer's intravenous formulation of voriconazole (VFEND), containing SBE-CD was approved and launched in the U.S. and Europe. CyDex receives royalties on product sales ending on a country by country basis as the valid claims relating to the licensed patents relevant to each product expire. The last of such patents expires in 2013.

Under the agreements, Pfizer is obligated to disclose to us all results and improvements it generates related to Captisol, and granted us a worldwide, royalty-free, perpetual nonexclusive license, with the right to grant sublicenses, under all improvements it makes to Captisol (and any patent claims relating to Captisol) to make, use, and sell Captisol, including as incorporated into commercial products. All of Pfizer's chemistry, pharmaceutical, and toxicology data generated under the agreement are included in our Captisol DMF. We are also obligated to disclose our (or our licensees') improvements to Captisol to Pfizer, which Pfizer may use consistent with the other rights granted.

Absent early termination, the option agreement will expire upon the expiration of all licensed patents. The nonexclusive license and exclusive licenses will expire, on a country-by-country basis, upon expiration of the



## **Table of Contents**

last-to-expire patent in such country. Pfizer may terminate any of the agreements with or without cause, and either party may terminate any agreement for the other party's uncured material breach of that agreement. Termination of one agreement does not affect the other agreements, and the research license to Pfizer and Pfizer's license to us will survive termination of the option agreement.

### **Additional Royalty Program Expected in 2011**

#### ***Nexterone (Prism Pharmaceuticals)***

In 2006, CyDex outlicensed Nexterone<sup>®</sup>, an injectable formulation combining amiodarone and Captisol<sup>®</sup>, to Prism Pharmaceuticals. Under the terms the agreement, Prism is responsible, under an exclusive worldwide license from CyDex, for all development and commercialization of Nexterone at its sole expense. CyDex is supplying Captisol to Prism for use in accordance with the terms of the license agreement under a separate supply agreement. Prism has paid milestone payments and is obligated to pay royalties to us on sales of Nexterone through March 2029. On November 19, 2010, Prism received marketing approval from the FDA for Nexterone and has announced plans to launch Nexterone in the United States in 2011.

### **Select Late-Stage Development Programs**

#### ***PROMACTA (GSK, Phase III HepC-Related Thrombocytopenia)***

PROMACTA is approved for ITP and we receive royalties from GSK on world-wide sales. In an effort to expand PROMACTA'S use, GSK is currently running two large Phase III studies designed to demonstrate PROMACTA'S value in treatment of thrombocytopenia in patients with Hepatitis C. These trials are expected to be completed in the third quarter of 2011. GSK is also conducting Phase II clinical studies in patients with solid tumors, sarcoma and advanced Myelodysplastic Syndrome (MDS) or Secondary Acute Myeloid Leukemia after MDS.

#### ***Carfilzomib (Onyx, Phase III/NDA, Multiple Myeloma)***

CyDex and Onyx Pharmaceuticals (formerly Proteolix) entered into a collaboration in 2005 to develop the Captisol-enabled IV formulation of carfilzomib for refractory multiple myeloma. Onyx has recently reported positive Phase II data for this program and has initiated the filing of a rolling NDA with the FDA based upon this data. Onyx expects to complete filing of the NDA by mid-2011 and will receive expedited review by the FDA because of the program's FDA-granted Fast Track status. We are eligible to receive milestones, royalties and Captisol material sales revenue from this program.

#### ***CXCR2 Inhibitor (Merck, Phase IIb, COPD)***

SCH 527123 is a CXCR2 antagonist that resulted from our collaboration with Merck (formerly Schering-Plough). Merck is currently running a 500 patient Phase IIb study in chronic obstructive pulmonary disease, or COPD, that is expected to complete in the third quarter of 2012, according to clinicaltrials.gov. We are eligible to receive milestones and royalties from this program.

#### ***Dinaciclib-CDK Inhibitor (Merck, Phase II, Oncology)***

Dinaciclib is a CDK inhibitor that resulted from our collaboration with Merck (formerly Schering-Plough). Merck is currently running multiple Phase II oncology studies for various tumor types, including breast, melanoma, and multiple myeloma. A Phase II clinical study in patients with Acute Myelogenous Leukemia and Acute Lymphoblastic Leukemia was recently completed. We are eligible to receive milestones and royalties from this program.

#### ***Dual Action P38 Inhibitor (BMS, Phase II, Inflammation)***

BMS 582949 is an orally active p-38 mitogen-activated protein (MAP) kinase inhibitor that resulted from our collaboration with BMS. Phase II studies were completed for the treatment of moderate to severe psoriasis and

**Table of Contents**

for rheumatoid arthritis (RA). Phase II studies in atherosclerosis are ongoing. BMS announced in 2010 that they will be starting additional Phase II studies in 2011 for this program.

***JNK Inhibitor (Celgene, Phase II, Inflammation)***

CC-930 is a JNK inhibitor that is being developed by Celgene for inflammatory disorders. Celgene announced in the fourth quarter of 2010 that this program was entering Phase II development for idiopathic pulmonary fibrosis. Patient enrollment for this study was initiated in January 2011. We are eligible to receive milestones and royalties from this program.

***IL-9 Antibody (Medimmune, Phase II, Asthma)***

MEDI-528, a humanized antibody targeting IL-9, is under development by AstraZeneca's subsidiary, MedImmune. MEDI-528 is currently in a 320-patient Phase II clinical study for moderate-to-severe asthma. The study is anticipated to be completed in the fourth quarter of 2011. We are eligible to receive milestones and royalties from this program.

**Internal Product Development Programs**

As summarized in the table below, we are developing several proprietary products for a variety of indications. These programs represent our future licensing opportunities to expand our partnered asset portfolio.

| <b>Program</b>  | <b>Disease/Indication</b>  | <b>Development Phase</b> |
|---|----------------------------|--------------------------|
| Selective Androgen Receptor Modulators (SARMs) (agonists)                                     | Muscle wasting and frailty | Phase I                  |
| Captisol-Enabled Clopidogrel IV   | Anti-platelet              | Phase II                 |
| Captisol-Enabled Melphalan IV   | Oncology                   | Phase II                 |
| Captisol-Enabled Topiramate IV  | Epilepsy/Seizures          | Preclinical              |
| Glucagon receptor antagonists   | Diabetes                   | Preclinical              |
| <b><i>Selective Androgen Receptor Modulators (SARM) Research and Development Programs</i></b> |                            |                          |

We are developing tissue selective androgen receptor modulators, or SARMs, a novel class of non-steroidal, orally active molecules that selectively modulate the activity of the androgen receptor in different tissues, providing a wide range of opportunities for the treatment of many diseases and disorders in both men and women. SARMs may provide utility in the treatment of patients with frailty, cachexia, osteoporosis, sexual dysfunction and hypogonadism. LGD-4033, our current lead compound, is a next-generation SARM designed to provide the benefits of androgen receptor stimulation on skeletal muscle and bone without the side effects of currently marketed androgens.

Preclinical studies conducted with LGD-4033 suggest that the compound may have favorable activity in the treatment of cachexia, frailty, osteoporosis, hypogonadism as well as other disorders. LGD-4033 has anabolic activity in muscle and bone and in animal models of osteoporosis and muscle wasting restores these tissues to normal levels. By comparison, the compound has weak, partial agonist activity on the prostate and has little effect on this tissue at expected therapeutic doses. The tissue selective properties of LGD-4033 are independent of local drug concentration indicating that tissue selectivity is inherent in the compound. We filed an Investigational New Drug (IND) in December 2008 for LGD-4033. Phase I clinical trials began in June 2009. We completed a Phase I single ascending dose trial in the fourth quarter of 2009. LGD-4033 was found to be well absorbed with good pharmacokinetics consistent with a once-a-day dosing and there were no serious or dose dependent adverse events. A Phase I Multiple Ascending Dose clinical trial has been initiated with results expected in 2011.

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## **Table of Contents**

### ***Captisol-Enabled Clopidogrel IV***

We are developing a proprietary, novel intravenous Captisol-enabled formulation of clopidogrel bisulfate. Clopidogrel is the active ingredient in PLAVIX® (clopidogrel bisulfate), an orally available antiplatelet drug marketed by BMS and Sanofi-Aventis. Captisol-enabled clopidogrel IV is being developed as an alternative dosage form to oral PLAVIX, which will allow for use when oral delivery is not possible, and more importantly, provide for an onset of anti-platelet activity in less than 15 minutes (as opposed to 2-6 hours for the oral). Rapid onset of Captisol-enabled clopidogrel IV will be beneficial for the population of patients that are candidates for PCI (percutaneous coronary intervention). CyDex initiated the clinical development program for Captisol-enabled clopidogrel with a dose-ranging study in healthy volunteers. The data to date indicates CDX-157 is safe, well tolerated, and produced dose dependent rapid inhibition of ADP-induced platelet aggregation.

### ***Captisol-Enabled Melphalan IV***

We are developing a proprietary Captisol-enabled formulation of melphalan as an injectable, palliative treatment for patients with multiple myeloma. Melphalan, which is currently marketed by GSK under the name Alkeran®, is the standard of care for use in conditioning regimens prior to autologous stem cell transplant in patients with multiple myeloma. Our Captisol-enabled form of melphalan does not require a special non-aqueous dissolving solvent system containing high levels of propylene glycol for reconstitution, and can be dissolved directly into saline. This allows for longer administration durations and slower infusion rates, enabling doctors to safely achieve a higher dose intensity of pre-transplant chemotherapy. We are currently completing a phase II study for this program. The Captisol-enabled melphalan program has also obtained orphan drug designation from the FDA.

### ***Captisol-Enabled Topiramate IV***

We are developing a proprietary, novel intravenous Captisol-enabled formulation of topiramate. Topiramate is currently only available as an oral drug and sold under the trade name of Topamax® (marketed by Johnson and Johnson). Approved indications for Topamax are initial monotherapy in epilepsy, adjunctive therapy in epilepsy, and prophylaxis of migraine. Captisol-enabled IV topiramate is designed to meet the needs of physicians that require the benefits of Topamax therapy, but in the acute care setting. The Captisol-enabled form of topiramate, which can be administered by either intravenous or intramuscular routes for faster onset of action than orally administered Topamax, would allow continuation of therapy for incapacitated patients or other patients that for any reason cannot take oral medications. We are currently completing preclinical studies for this program.

### ***Glucagon Receptor Antagonist Research Program***

We are developing small molecule glucagon receptor antagonists for the treatment of Type 2 diabetes mellitus. Compounds that block the action of glucagon may reduce the hyperglycemia that is characteristic of this disease. Glucagon stimulates the production of glucose by the liver and its release into the blood stream. In diabetic patients, glucagon secretion is abnormally elevated which contributes to hyperglycemia in these patients. Compounds have been discovered that block the action of glucagon on human hepatocytes *in vitro*. Our advanced glucagon antagonist compounds demonstrate oral bioavailability in rodents.

### ***Other Internal Programs Awaiting Further Development Funding, Either Through Ligand or a Partner***

DARA (Phase II, Hypertension)

Aplindore (Phase II, Restless Leg/Parkinson's)

Captisol-Enabled Nasal Budesonide (Phase I, Allergic Rhinitis)

Hepatitis C HepDirect nucleoside analogue program (Phase I)



## **Table of Contents**

Oral EPO-Receptor Agonist (Preclinical, Anemia)

GCSF-Receptor Agonist (Preclinical, Neutropenia)

Thyroid Receptor-beta Agonist (Preclinical, Dyslipidemia)

Histamine H3 Receptor Antagonist (Preclinical, Cognitive Disorders)

Glucokinase Activator (Preclinical, Diabetes)

DGAT Inhibitor (Preclinical, Diabetes)

IRAK4 Inhibitor (Preclinical, Inflammation)

CCR1 Inhibitor (Preclinical, oncology)

CRTH2 Inhibitor (Preclinical, Inflammation)

Topical JAK3 (Preclinical, Inflammation)

## **Recent Acquisitions and Other Transactions**

### **CyDex Pharmaceuticals, Inc. Acquisition**

On January 26, 2011, we completed the acquisition of CyDex following approval of the transaction by CyDex stockholders. As a result, we gained revenue from four currently marketed products and one currently approved product, a large portfolio of partnered drug development programs, an internal pipeline of proprietary drugs, and the Captisol drug formulation platform technology. We paid \$31.2 million in cash, of which \$20.0 million was financed, with an additional \$4.3 million to be paid on the one-year anniversary of the transaction. In addition, as previously disclosed, Cydex stockholders are entitled to contingent cash payments related to certain transactions and pursuant to a revenue share plan.

**CyDex Acquisition Rationale** The acquisition of CyDex cash-flow positive business is expected to accelerate our projected financial growth. Our portfolio of fully funded partnered programs will expand from 35 programs pre-acquisition to more than 60 programs, significantly increasing the opportunity for new revenue streams over the next few years. The existing CyDex portfolio includes numerous high-quality license and royalty bearing agreements, including Onyx Pharmaceuticals for carfilzomib and Prism for Nexterone. This transaction further diversifies our business by adding a proprietary and well-validated platform in the increasingly important drug reformulation segment of the pharmaceutical industry, which we believe has become an increasingly valuable solution to the issues related to market erosion due to generic competition and continued clinical and regulatory uncertainty.

**CyDex Brings the Following to us** The CyDex acquisition brings numerous benefits to our business. In addition to generating annual revenue from multiple sources (royalties from four marketed drugs, material sales from the selling of Captisol, and license and milestone payments), we receive multiple partnered collaborations around future revenue generating assets. For example, the Onyx collaboration around Captisol-enabled carfilzomib, the Prism collaboration around Nexterone (captisol-enabled amiodarone) and several undisclosed large pharma Captisol supply relationships all have the potential to deliver significant revenue to us in the form of milestone, royalty, and Captisol material sales revenue in the coming years. In addition, ownership of the Captisol technology brand, which is an industry recognized solution to solubility issues, adds significant value to our business. CyDex also adds a substantial pipeline of proprietary Captisol-enabled products for future potential licensing;

Clopidogrel IV in Phase II for thrombosis

Melphalan IV in Phase II for stem cell conditioning

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**Table of Contents**

Budesonide/Azelastine nasal in Phase I for seasonal rhinitis

Topiramate IV in Preclinical development for seizures

**Technology Agreements** In September 1993, CyDex obtained from the University of Kansas, or KU, an exclusive, worldwide license, with the right to sublicense, under the original Captisol patents, as well as intellectual property covering the results generated during specified CyDex-sponsored research activities at KU. We are responsible for maintaining the DMF for Captisol. KU retained a research license to the technology for noncommercial educational and research purposes, and agreed to assign to us its then-pending license agreements with Pfizer relating to Captisol.

In August 2004, we amended the KU license agreement to replace all future payment terms under the agreement, including royalties, with a concurrent lump sum payment and issuance of CyDex stock to KU. KU also granted us a right of first refusal to acquire exclusive, worldwide rights to any future improvements to Captisol, including any next generation formulations of Captisol, that are developed by KU or by third parties pursuant to research sublicenses granted by KU. KU is obligated to disclose to us in writing any such improvement, and upon receipt of such information, we may exercise our right of first refusal to obtain such an exclusive license upon terms and conditions not materially different than those described in the original KU license agreement. To date, we have not exercised our right of first refusal to acquire any such improvements. The license agreement with KU will remain in force until the expiration of all licensed patents.

In December 1993, as contemplated by our license agreement with KU, KU entered into an option agreement with Pfizer, simultaneously transferring to us all of KU's rights and obligations under that agreement.

**Metabasis Acquisition**

In January 2010, we completed the acquisition of Metabasis Therapeutics, Inc., or Metabasis, following approval of the transaction by Metabasis stockholders. As a result, we gained additional pipeline assets and drug discovery technologies and resources. We paid \$1.6 million in cash or about \$0.046 per Metabasis share to Metabasis stockholders. In addition, Metabasis stockholders received four tradable Contingent Value Rights (CVRs), one CVR from each of four respective series of CVRs, for each Metabasis share. The CVRs will entitle Metabasis stockholders to cash payments as frequently as every six months as cash is received by us from proceeds from Metabasis partnership with Roche or the sale or partnering of any of the Metabasis drug development programs, among other triggering events.

We received multiple pipeline additions from the Metabasis acquisition, including the preclinical Glucagon Receptor Antagonist (diabetes) and Thyroid Receptor Beta Agonist (dyslipidemia) programs, as well as several other programs for hepatitis B, hepatocellular carcinoma (HCC), and diabetes. We also received the proprietary HepDirect drug discovery platform technology which improves the ability of drugs to be delivered to the liver.

**Interleukin-9 Asthma Royalty rights**

In May 2010, we announced the acquisition from the Genaera Liquidating Trust of certain intellectual property and interests in future milestones and royalties for MEDI-528, an IL-9 antibody program under development by AstraZeneca's subsidiary, MedImmune. MEDI-528 is currently in a 320-patient Phase II study for moderate-to-severe asthma.

We paid \$2.75 million to the Genaera Liquidating Trust in connection with the purchase. This opportunity arose from initial diligence and work conducted by Biotechnology Value Fund, L.P. (BVF). As part of this transaction and a result of BVF's contributions, we entered into a separate agreement with BVF and certain of its affiliates, whereby BVF and us will share the purchase price and any proceeds from the deal equally. Accordingly, BVF has paid us \$1.375 million.

## **Table of Contents**

MEDI-528 is a humanized antibody targeting IL-9, which is a member of a family of inflammatory signaling molecules known as interleukins. Several of these interleukin molecules, including IL-9, are thought to play an important role in the pathogenesis of asthma. MEDI-528 is an example of a new generation of asthma medicines designed to target underlying interleukin signaling pathways. IL-9 is thought to be an especially attractive target because it has been demonstrated to be one of the early initiators of multiple interleukin signaling events, making its inhibition with MEDI-528 potentially broad in its impact on asthma symptoms. The treatment needs of moderate-to-severe asthmatics create a multi-billion dollar market as of today with new therapeutic options in high demand. MEDI-528 was originally identified by the Genaera Corporation and then licensed to MedImmune in 2001. After AstraZeneca's acquisition of MedImmune in 2007, AstraZeneca continued to support this program by initiating a 320-patient Phase II study in 2009 for MEDI-528.

### **CXCR4 Agreement with Proximagen**

In September 2010, we transferred exclusive license rights to Proximagen Limited for a series of compound hits related to the CXCR4 target with application for a number of indications including those related to the central nervous system. We received an upfront payment and continue to be entitled to receive potential future milestone and royalty payments.

The transfer of exclusive rights was made under a novation agreement that stems from a 2004 drug discovery alliance between Pharmacopeia and Swedish Orphan Biovitrum AB (formerly known as Biovitrum AB), whereby Pharmacopeia's compound library was accessed to identify and optimize leads. By virtue of the novation agreement, Proximagen becomes a party to the 2004 agreement in place of Swedish Orphan Biovitrum AB with respect to the CXCR4 compounds.

### **Divestment of High-Throughput Screening Asset to Venenum BioDesign**

In September 2010, we divested our combinatorial chemical library and associated proprietary technology to Venenum Biodesign, LLC, an affiliate of Medical Diagnostic Laboratories, LLC, members of Genesis Biotechnology Group (GBG), for \$1.8 million. Under the terms of the agreement, we received \$1 million at the close of the transaction. In addition we will receive \$800,000 over the following two years and 10% of all revenues from third party collaborations for three years.

The combinatorial chemistry asset, which we obtained in the acquisition of Pharmacopeia in December 2008, comprises an encoded combinatorial library collection (ECLiPS) and an ultra-high throughput screening platform.

### **Sublicense Agreement with Pfizer for Tanaproget Program**

In December 2010, our partner, Pfizer, Inc., granted a sublicense to a multi-national pharmaceutical company for Tanaproget, also known as NSP-989. As a result, we received an upfront payment of \$1.0 million from Pfizer. We are entitled to clinical and regulatory milestone payments from Pfizer as Tanaproget advances through the development process, as well as tiered royalties on net sales.

Tanaproget is a tissue-selective, non-steroidal contraceptive progesterone receptor agonist that has the potential for an improved side effect profile over current steroid containing contraceptives. The sublicensee is now responsible for the worldwide development, registration and commercialization of Tanaproget.

### **Strategic Alliance with Chiva Pharmaceuticals of China for HepDirect Drug Development**

In January 2011, we entered into a strategic relationship with Chiva Pharmaceuticals, Inc., or Chiva, to develop multiple of our assets and technology in China and potentially worldwide. Chiva was granted licenses to begin immediate development in China of our two clinical-stage HepDirect programs, Pradefovir for hepatitis B



## **Table of Contents**

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).

Chiva is developing these programs to address the high unmet medical need in China's fast growing pharmaceutical market. The Chinese government is offering financial support to pharmaceutical companies like Chiva who can develop innovative therapies in China for public health needs such as infectious disease and oncology.

Under the terms of the agreement, we have the potential to earn over \$100 million in milestones and royalties on potential sales related to our assets. In addition, we have the potential to receive a 10% equity position in Chiva and will also receive an undisclosed percentage of any sublicensing revenue generated from sublicensing of collaboration compounds to third parties in a major world market. We are entitled to receive initial 2011 license payments that total \$1 million.

The following technology and programs are included in our license to Chiva:

Pradefovir is a HepDirect pro-drug of PMEAs, which is the same active metabolite, produced by the FDA-approved HepB drug adefovir dipivoxil (Hepsera®). The pro-drug enables higher concentrations of the drug in the liver, the primary site of replication for the hepatitis B virus, and lower concentrations in the kidney where significant dose-limiting toxicities arise. Pradefovir displayed strong anti-HepB activity in Phase II studies conducted in the U.S.

MB07133 is a HepDirect pro-drug of the intermediate form of cytarabine (araC) 5'-monophosphate, which is designed to deliver a high concentration of the active form of the drug for the treatment of hepatocellular carcinoma. MB07133 displayed a strong response rate on intra-hepatic tumor regression in a Phase I/II study conducted in the U.S.

HepDirect is a pro-drug technology that targets delivery of certain drugs to the liver by using a proprietary chemical modification that renders a drug biologically inactive until cleaved by a liver-specific enzyme. HepDirect may improve efficacy and/or safety of certain drugs and can be applied to marketed or new drug products.

## **Technology**

We employ various research laboratory methods to discover and conduct preclinical development of new chemical entities. These methods are performed either in our own laboratories or in those of contract research organizations under our direction.

In our efforts to discover new and important medicines, we have concentrated on certain technologies and acquired special expertise related to intracellular receptors and the receptors for hematopoietic growth factors. Intracellular receptors are involved in the actions of non-peptide hormones and drugs such as selective estrogen receptor modulators, or SERMs, and SARMs. Hematopoietic growth factor receptors are involved in the differentiation and proliferation of blood cell progenitors, the formation of new blood cells, and the action of drugs such as PROMACTA, Epogen and Neumega. We use and have developed particular expertise in co-transfection assays, which measure gene transcription in response to the activation of a target receptor, and gene expression in cells selected for expression of particular receptors or transfected with cDNA for particular receptors. Some of these methods are covered by patents issued to or licensed by us, are trade secrets, or are methods that are in the public domain, but that we may use in novel ways to improve our efficiency in identifying promising leads and developing new chemical entities.

In connection with our merger with Metabasis, we acquired certain HepDirect Technology. HepDirect technology supplements our core drug discovery technology platform of ligand-dependent gene expression.

## **Table of Contents**

HepDirect is a prodrug technology that targets delivery of certain drugs to the liver by using a proprietary chemical modification that renders a drug biologically inactive until cleaved by a liver-specific enzyme.

In connection with our acquisition of CyDex, we acquired the Captisol drug formulation platform technology. We use this technology to improve the solubility, stability, and/or pharmacokinetics of drugs, whether in our own internal development pipeline or those of our partners.

### **Manufacturing**

We currently have no manufacturing facilities and, accordingly, rely on third parties, including our collaborative partners, for clinical production of any products or compounds.

We currently outsource the production of Captisol to Hovione FarmaCiencia SA, or Hovione, a major supplier of APIs and API intermediates located in Lisbon, Portugal. In December 2002, we entered into a Captisol supply agreement with Hovione, under which Hovione is our exclusive supplier of Captisol and is restricted from supplying Captisol to third parties, so long as specified conditions are met. In addition to its main manufacturing site in Loures, Portugal, Hovione will qualify a second site in Macau if our forecast requirements for Captisol exceed the capabilities of the Loures site. We have ongoing minimum purchase commitments under the agreement and are required to pay Hovione an aggregate minimum amount during the agreement term. Hovione must supply amounts exceeding our forecasts by a fixed percent. In January 2008, we entered into an amendment to the supply agreement, under which we and Hovione agreed to reduce our minimum annual purchase requirement of Captisol and to extend the term of the agreement.

We pay Hovione unit prices, in U.S. dollars, for all Captisol supplied after the commercial production date, which prices may be adjusted based on the following:

fluctuation in currency exchange rates;

change in raw material prices;

change in the Portuguese consumer price index; and

our requested changes to the Captisol manufacturing process or specifications.

In the January 2008 amendment to the supply agreement, we and Hovione agreed to clarify how the exchange rate between the dollar and the Euro would be determined and applied.

In the event of a Captisol supply interruption, we are permitted to designate and, with Hovione's assistance, qualify one or more alternate suppliers. If the supply interruption continues beyond a designated period, we may terminate the agreement. In addition, if Hovione cannot supply our requirements of Captisol due to an uncured force majeure event or if the unit price of Captisol exceeds a set figure, we may obtain Captisol from a third party. In the January 2008 amendment to the supply agreement, we and Hovione agreed to remove the obligation of Hovione to hold additional quantities of Captisol inventory on our behalf.

Unless terminated earlier, the agreement will continue until the expiration in December 2019. The term will automatically continue after the initial term for successive two year renewal terms, unless either party gives written notice of its intention to terminate the agreement no less than two years prior to the expiration of the initial term or renewal term. In addition, either party may terminate the agreement for the uncured material breach or bankruptcy of the other party or an extended force majeure event. We may terminate the agreement for extended supply interruption, regulatory action related to Captisol or other specified events.

Under the agreement, there are two relationship management committees. The first committee is a technical committee that is responsible for resolving technical issues relating to qualification of facilities, change control,



## **Table of Contents**

and regulatory compliance of the manufacture of Captisol. The second committee is a management committee that is responsible for managing the overall relationship between the parties. We have designated one employee to represent us on each of the two committees.

For further discussion of these items, see below under Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

### **Research and Development Expenses**

Research and development expenses from continuing operations were \$22.1 million, \$39.9 million and \$30.8 million in 2010, 2009 and 2008, respectively, of which 61%, 47% and 100%, respectively, were sponsored by us.

There were no research and development expenses from discontinued operations in 2010, 2009 and 2008.

### **Competition**

Some of the drugs we are developing may compete with existing therapies or other drugs in development by other companies. A number of pharmaceutical and biotechnology companies are pursuing intracellular receptor-related approaches to drug discovery and development. Furthermore, academic institutions, government agencies and other public and private organizations conducting research may seek patent protection with respect to potentially competing products or technologies and may establish collaborative arrangements with our competitors.

Many of our existing or potential competitors, particularly large pharmaceutical companies, have greater financial, technical and human resources than we do and may be better equipped to develop, manufacture and market products. Many of these companies also have extensive experience in preclinical testing and human clinical trials, obtaining FDA and other regulatory approvals and manufacturing and marketing pharmaceutical products.

Our competitive position also depends upon our ability to attract and retain qualified personnel, obtain patent protection or otherwise develop proprietary products or processes, and secure sufficient capital resources for the often substantial period between technological conception and commercial sales. For a discussion of the risks associated with competition, see below under Item 1A. Risk Factors.

### **Government Regulation**

The manufacturing and marketing of our products, our ongoing research and development activities and products being developed by our collaborative partners are subject to regulation for safety and efficacy by numerous governmental authorities in the United States and other countries. In the United States, pharmaceuticals are subject to rigorous regulation by federal and various state authorities, including the FDA. The Federal Food, Drug and Cosmetic Act and the Public Health Service Act govern the testing, manufacture, safety, efficacy, labeling, storage, record keeping, approval, advertising and promotion of our products. There are often comparable regulations that apply at the state level. Product development and approval within this regulatory framework takes a number of years and involves the expenditure of substantial resources.

The steps required before a pharmaceutical agent may be marketed in the United States include (1) preclinical laboratory tests, (2) the submission to the FDA of an IND, which must become effective before human clinical trials may commence, (3) adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug, (4) the submission of an NDA to the FDA and (5) the FDA approval of the NDA prior to any commercial sale or shipment of the drug. In addition to obtaining FDA approval for each product, each domestic drug-manufacturing establishment must be registered with the FDA and, in California, with the

## **Table of Contents**

Food and Drug Branch of California. Domestic manufacturing establishments are subject to pre-approval inspections by the FDA prior to marketing approval, then to biennial inspections, and must comply with current Good Manufacturing Practices (cGMP). To supply products for use in the United States, foreign manufacturing establishments must comply with cGMP and are subject to periodic inspection by the FDA or by regulatory authorities in such countries under reciprocal agreements with the FDA.

For both currently marketed and future products, failure to comply with applicable regulatory requirements after obtaining regulatory approval can, among other things, result in the suspension of regulatory approval, as well as possible civil and criminal sanctions. In addition, changes in existing regulations could have a material adverse effect to us.

For marketing outside the United States before FDA approval to market, we must submit an export permit application to the FDA. We also are subject to foreign regulatory requirements governing human clinical trials and marketing approval for drugs. The requirements relating to the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country and there can be no assurance that we or any of our partners will meet and sustain any such requirements.

We are also increasingly subject to regulation by the states. A number of states now regulate, for example, pharmaceutical marketing practices and the reporting of marketing activities, controlled substances, clinical trials and general commercial practices. We have developed and are developing a number of policies and procedures to ensure our compliance with these state laws, in addition to the federal regulations described above. Significant resources are now required on an ongoing basis to ensure such compliance. For a discussion of the risks associated with government regulations, see below under Item 1A. Risk Factors.

## **Patents and Proprietary Rights**

We believe that patents and other proprietary rights are important to our business. Our policy is to file patent applications to protect technology, inventions and improvements to our inventions that are considered important to the development of our business. We also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain our competitive position.

Royalties we currently receive from King on AVINZA represent a portion of our ongoing revenue. The United States patent on AVINZA is not expected to expire until November 2017; however, applications for generic forms of AVINZA have been submitted to the FDA. The last to expire United States patents relating to PROMACTA is not expected to expire until December 2024. The last to expire United States patents related to Captisol is not expected to expire until 2029. Subject to compliance with the terms of the respective agreements, our rights under our licenses with our exclusive licensors extend for the life of the patents covering such developments. For a discussion of the risks associated with patent and proprietary rights, see below under Item 1A. Risk Factors.

## **Human Resources**

As of February 1, 2011, we had 31 full-time employees, of whom 12 are involved directly in scientific research and development activities. Of these employees, 8 hold Ph.D. or M.D. degrees.

## **Table of Contents**

### **ITEM 1A. RISK FACTORS**

*The following is a summary description of some of the many risks we face in our business. You should carefully review these risks in evaluating our business, including the businesses of our subsidiaries. You should also consider the other information described in this report.*

#### **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 product and at levels at the FDA has challenged developers to demonstrate 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.***

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.

## **Table of Contents**

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.

On September 10, 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 seeks a judgment that would, among other things, prevent Actavis from commercializing its proposed morphine product until after expiration of the 339 patent. The Court held a claim construction hearing on March 19, 2010 and issued a ruling. The Court has scheduled trial to begin on March 7, 2011.

On July 21, 2009, King, 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. The parties are in the midst of fact discovery. A claim construction hearing was held on September 23, 2010 and the Court issued a ruling on October 1, 2010. Trial is currently expected to be set to start during the second half of 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, including bazedoxifene and lasofoxifene. 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

## **Table of Contents**

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 the program is under review. 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. 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 and Macau, China, but those sites are not yet 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 2011 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.



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**Table of Contents**

*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. 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. Security holders of CyDex, Neurogen and Metabasis also received contingent value rights under which we could be required to make unspecified payments under certain circumstances. In April 2010, we earned a \$6.5 million milestone payment from Roche as a result of Roche progressing RG7348 into a Phase I clinical trial for the treatment of HCV infection. The milestone payment arises from a 2008 collaboration and license agreement between Roche and Metabasis and approximately 65% was distributed to CVR holders under a contingent value rights agreement and the former landlord of Metabasis.

On June 15, 2010, we committed to a plan to close our operations at our Cranbury, New Jersey facility, with an expected completion in the fourth quarter of 2010. In September 2010, we ceased use of this facility. 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.

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;

**Table of Contents**

our ability to reach a favorable resolution with the IRS with respect to their audit of our fiscal 2007 federal tax return, or to other potential tax assessments;

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.

***If, as the result of a merger, or otherwise, our collaborative partners were to 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.***

Our collaborative partners may change the focus of their development and commercialization efforts as the result of a merger. Pharmaceutical and biotechnology companies have historically re-evaluated their priorities from time to time, including following mergers and consolidations which are common in these industries, and two of our collaborative partners have recently entered into merger agreements. In October 2009, Wyeth, a collaborative partner of ours, and Pfizer announced that Pfizer had completed its acquisition of Wyeth in a cash and stock transaction. Furthermore, in November 2009, Schering-Plough Corporation, another of our collaborative partners, and Merck & Co., Inc., or Merck, announced that Merck and Schering-Plough had combined, under the name Merck, in a stock and cash transaction. As a result of the consummation of these mergers, our collaborative partners may develop and commercialize, either alone or with others, products and services that are similar to or competitive with our alliance products. Furthermore, the ability of our alliance products to reach their potential could be limited if our collaborative partners reduce or fail to increase spending related to such products as a result of these mergers.

On May 3, 2010, we received written notice from Trevena, Inc. that, effective immediately, it was exercising its right to terminate the Research and License Agreement, dated February 5, 2009, as amended, between Trevena and us. Under this agreement, we agreed to screen biological target receptors selected by Trevena against our library of compounds to identify potential active compounds for the development of novel therapeutics. We believe that this agreement was terminated in response to changes in Trevena internal research priorities relating to the subject matter of the research collaboration.

On May 13, 2010, Pfizer Inc. announced in a Form 10-Q filed with the SEC that it is in the process of withdrawing its NDAs with the FDA relating to Fablyn (lasofoxifene tartrate). As previously disclosed, Fablyn is a selective estrogen receptor modulator product candidate that resulted from a collaboration between Pfizer and us formed to develop therapies for osteoporosis. Pfizer submitted an NDA to the FDA and a marketing authorization application to the European Medicines Agency for Fablyn for the treatment of osteoporosis in



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**Table of Contents**

December 2007 and January 2008, respectively, and in February 2009, Pfizer received approval from the European Commission for Fablyn tablets. Under the terms of our agreement with Pfizer, we are entitled to receive royalty payments on worldwide net sales of lasofoxifene for any indication. Pfizer has indicated that it is exploring strategic options for Fablyn, including out-licensing or sale.

On September 7, 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 Pharmacoepia, LLC, as successor to Pharmacoepia 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 October, 2010, Pfizer announced that it had entered into an agreement to acquire King. Pfizer has commenced a tender offer and Pfizer and King are targeting a first-quarter 2011 closing assuming execution of the tender process and receipt of the appropriate regulatory clearances. There can be no assurance of the impact that this anticipated acquisition will have on our relationship with Pfizer or King, or that the acquisition will occur at all.

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.

***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. 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 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 expire in 2010 in the U.S. and are expected to expire between 2011 and 2016 outside the U.S., and if our other intellectual property rights are not sufficient to prevent a generic form of Captisol from coming to market, the source of the vast majority of our 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.

## **Table of Contents**

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 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 expire in 2010 in the U.S. and are expected to expire between 2011 and 2013 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

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**Table of Contents**

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 using 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 December 31, 2010, our accumulated deficit was \$691.9 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

## **Table of Contents**

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 \$30.9 million as of December 31, 2010). 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.

## **Table of Contents**

***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 money to run our business and may be required to raise this money 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.

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.



## **Table of Contents**

***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 AVINZA, PROMACTA, VIVIAN and CONBRIZA 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.

***Significant returns of products we sold prior to selling our prior commercial businesses could harm our operating results.***

Under our agreements to sell our prior commercial businesses, we remain financially responsible for returns of our products sold before those businesses were transferred to their respective buyers. Consequently, if returns of those products are higher than expected, we could incur substantial expenses for processing and issuing refunds for those returns which, in turn, could negatively impact our financial results. The amount of returns could be affected by a number of factors including, but not limited to, ongoing product demand, product rotation at distributors and wholesalers, and product stability issues.

***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.

## **Table of Contents**

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.

### ***We may be unable to successfully integrate Metabasis and realize the anticipated benefits of the acquisition.***

In January 2010, we completed our merger with Metabasis. The integration of an independent company is a complex, costly and time-consuming process. It is possible that the integration processes could result in the loss of key employees, diversion of management's attention, the disruption or interruption of, or the loss of momentum in, our ongoing business or inconsistencies in standards, controls, procedures and policies, any of which could adversely affect our ability to maintain relationships with licensors, collaborators, partners, suppliers and employees or our ability to achieve the anticipated benefits of the merger, or could reduce our earnings or otherwise adversely affect the business and financial results of the combined company and, as a result, adversely affect the market price of our common stock.

During the integration process for our Metabasis acquisition, we have become aware that the electronic data we received as part of the acquisition is incomplete due to the data retention and backup policies in place at Metabasis prior to the time of the acquisition. The missing electronic data could impact our ability to partner affected compounds and may lead to increased costs and development time for affected programs, which could impact our ability to achieve the anticipated benefits of the acquisition and lead to unanticipated development costs.

We expect to incur significant costs and commit significant management time integrating Metabasis' business operations, technology, development programs, products and personnel with those of ours. If we do not successfully integrate the business of Metabasis, the expenditure of these costs will reduce our cash position.

### ***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. On November 19, 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.

## **Table of Contents**

***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.***

While no material weaknesses were identified as of December 31, 2010, we cannot assure you that material weaknesses will not be identified in future periods. The existence of one or more material weakness or significant deficiency could result in errors in our consolidated financial statements. Substantial costs and resources may be required to rectify any internal control deficiencies. If we fail to 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 Pharmacoepia, Neurogen, Metabasis and CyDex have been allocated to net tangible assets, identifiable intangible assets, in process research and development and goodwill. To the extent the value of goodwill or identifiable intangible assets or other long-lived assets become impaired, we will be required to incur material charges relating to the impairment. Any impairment charges could have a material adverse impact on our results of operations and the market value of our common stock.

***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

**Table of Contents**

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.

***Our CyDex facilities are located in a tornado zone, and the occurrence of a tornado or other catastrophic disaster could damage our facilities and equipment, which could cause us to curtail or cease local operations.***

Our CyDex facilities are located outside of Kansas City, Kansas, which is in a tornado zone. We are therefore vulnerable to damage from tornados. We are also vulnerable to damage from other types of disasters, such as power loss, fire, floods and similar events. If any disaster were to occur, our ability to operate our business could be seriously impaired. We are insured against up to \$2.6 million in damages resulting from natural disasters, including tornados. We currently may not have adequate insurance 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.

**Table of Contents**

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

We currently occupy approximately 30,000 square feet of office and laboratory facility in San Diego, California leased through December 2011. We believe this facility is adequate to meet our space requirements for the foreseeable future.

We lease approximately 99,000 square feet in three facilities in Cranbury, New Jersey under leases that expire in 2016. We fully vacated this facility in September 2010.

We also lease a 52,800 square foot facility in San Diego that is leased through July 2015. In January 2008, we began subleasing the 52,800 square foot facility under a sublease agreement through July 2015. We fully vacated this facility in February 2008.

Neurogen Corporation conducted its operations in laboratory and administrative facilities on a single site located in Branford, Connecticut. The total facilities, which were owned by Neurogen comprised approximately 142,000 square feet, of which approximately 21,000 square feet was leased by another company month to month. On February 2, 2010, we sold the facilities, which included approximately 120,000 square feet of laboratory and office space, approximately 40,000 square feet of warehouse space, and the surrounding land for approximately \$3.5 million in cash, less expenses.

**Item 3. 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 4. Reserved**

**Table of Contents****PART II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities**  
**Market Information**

Our common stock is traded on the NASDAQ Global Market (formerly NASDAQ National Market) under the symbol LGND. These numbers give effect to the 1-for-6 reverse split effected on November 19, 2010.

The following table sets forth the high and low intraday sales prices for our common stock on the NASDAQ Global Market for the periods indicated:

|                                      | Price Range |          |
|--------------------------------------|-------------|----------|
|                                      | High        | Low      |
| <b>Year Ended December 31, 2010:</b> |             |          |
| 1st Quarter                          | \$ 13.80    | \$ 9.30  |
| 2nd Quarter                          | 11.64       | 8.22     |
| 3rd Quarter                          | 10.32       | 8.28     |
| 4th Quarter                          | 14.80       | 8.14     |
| <b>Year Ended December 31, 2009:</b> |             |          |
| 1st Quarter                          | \$ 19.20    | \$ 11.16 |
| 2nd Quarter                          | 19.08       | 15.06    |
| 3rd Quarter                          | 19.26       | 13.26    |
| 4th Quarter                          | 14.58       | 9.78     |

As of February 11, 2011, the closing price of our common stock on the NASDAQ Global Market was \$9.02.

**Holdings**

As of February 11, 2011, there were approximately 1,576 holders of record of the common stock.

**Dividends**

On March 22, 2007, we declared a cash dividend on our common stock of \$2.50 per share. As we have an accumulated deficit, the dividend was recorded as a charge against additional paid-in capital. The aggregate amount of \$252.7 million was paid on April 19, 2007 to shareholders of record as of April 5, 2007. We had previously never declared or paid any cash dividends on our capital stock. We do not intend to pay any additional cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, to finance future growth.

**Issuer Purchases of Equity Securities (1)**

| Month                           | Total Number of Shares Purchased During Month (2) | Average Price Paid Per Share (3) | Total Number of Shares Purchased as Part of Publicly Announced Plan | Maximum Dollar Value of Shares That May Yet Be Purchased Under the Plan (4) |
|---------------------------------|---|----------------------------------|---|---|
| October 1 to October 31, 2010   |   | \$                               |   | \$ 10,000,000   |
| November 1 to November 30, 2010 | 3,362   | \$ 8.46                          | 3,362   | \$ 9,971,565  |
| December 1 to December 31, 2010 | 7,320   | \$ 8.52                          | 10,682  | \$ 9,909,197  |

Total 10,682

30

**Table of Contents**

- (1) In June 2010, we announced that our board of directors authorized a stock repurchase program under Rule 10b-18 of the Securities Exchange Act of 1934, as amended, of up to \$10 million of shares of our common stock in the open market and negotiated purchases over a period of 24 months. The above table provides information regarding our stock repurchases in the quarter ended December 31, 2010. This program expires in June 2012 and may be discontinued at any time.
- (2) The purchases were made in open-market transactions.
- (3) Excludes commissions paid, if any, related to the share repurchase transactions.
- (4) Represents the difference between the \$10,000,000 of share repurchases authorized by our board of directors and the value of the shares repurchased from June 2010 through the indicated month.



**Table of Contents****Performance Graph**

The graph below shows the five-year cumulative total stockholder return assuming the investment of \$100 and the reinvestment of dividends (a one-time dividend of \$2.50 was declared on the common stock in April 2007) and is based on the returns of the component companies weighted monthly according to their market capitalizations. The graph compares total stockholder returns of our common stock, of all companies traded on the NASDAQ Stock market, as represented by the NASDAQ Composite® Index, and of the NASDAQ Biotechnology Stock Index, as prepared by The NASDAQ Stock Market Inc. The NASDAQ Biotechnology Stock Index tracks approximately 168 domestic biotechnology stocks.

The stockholder return shown on the graph below is not necessarily indicative of future performance and we will not make or endorse any predictions as to future stockholder returns.

|                                      | 12/31/05 | 12/31/06 | 12/31/07 | 12/31/08 | 12/31/09 | 12/31/10 |
|--------------------------------------|----------|----------|----------|----------|----------|----------|
| Ligand                               | 100%     | 98%      | 58%      | 33%      | 26%      | 18%      |
| NASDAQ Market (U.S. Companies) Index | 100%     | 110%     | 120%     | 72%      | 103%     | 120%     |
| NASDAQ Biotechnology Stocks          | 100%     | 101%     | 106%     | 92%      | 107%     | 123%     |

**Table of Contents****Item 6. Selected Consolidated Financial Data**

The following selected historical consolidated financial and other data are qualified by reference to, and should be read in conjunction with, our consolidated financial statements and the related notes thereto appearing elsewhere herein and Management's Discussion and Analysis of Financial Condition and Results of Operations. Our selected statement of operations data set forth below for each of the years ended December 31, 2010, 2009, 2008, 2007, and 2006 and the balance sheet data as of December 31, 2010, 2009, 2008, 2007, and 2006 are derived from our consolidated financial statements.

|   | 2010                              | 2009       | Year Ended December 31,<br>2008 | 2007       | 2006(2)    |
|---|-----------------------------------|------------|---------------------------------|------------|------------|
|   | (in thousands, except share data) |            |                                 |            |            |
| <b>Consolidated Statement of Operations Data:</b>         |                                   |            |                                 |            |            |
| Royalties   | \$ 7,279                          | \$ 8,334   | \$ 20,305                       | \$ 11,409  | \$         |
| Collaborative research and development and other revenues | 16,259                            | 30,606     | 7,000                           | 1,485      | 3,977      |
| Research and development expenses                         | 22,067                            | 39,870     | 30,770                          | 44,623     | 41,546     |
| General and administrative expenses                       | 12,829                            | 15,211     | 23,785                          | 30,410     | 43,908     |
| Lease exit and termination costs                          | 16,894                            | 15,235     |                                 |            |            |
| Write-off of acquired in-process research and development | 2,754                             | 442        | 72,000                          |            |            |
| Accretion of deferred gain on sale leaseback              | 1,702                             | 21,851     | 1,964                           | 1,964      | 3,397      |
| Loss from operations                                      | (29,304)                          | (9,967)    | (97,276)                        | (60,175)   | (78,080)   |
| Loss from continuing operations                           | (12,786)                          | (8,337)    | (97,460)                        | (34,759)   | (56,590)   |
| Discontinued operations (1)                               | 2,413                             | 6,389      | (654)                           | 316,447    | 24,847     |
| Net income (loss)   | (10,373)                          | (1,948)    | (98,114)                        | 281,688    | (31,743)   |
| Basic per share amounts:                                  |                                   |            |                                 |            |            |
| Income (loss) from continuing operations                  | \$ (0.65)                         | \$ (0.44)  | \$ (6.12)                       | \$ (2.15)  | \$ (4.21)  |
| Discontinued operations (1)                               | 0.12                              | 0.34       | (0.04)                          | 19.62      | 1.84       |
| Net income (loss)   | \$ (0.53)                         | \$ (0.10)  | \$ (6.16)                       | \$ 17.47   | \$ (2.37)  |
| Weighted average number of common shares                  |                                   |            |                                 |            |            |
|   | 19,613,201                        | 18,862,751 | 15,917,570                      | 16,124,731 | 13,436,421 |
| Diluted per share amounts:                                |                                   |            |                                 |            |            |
| Income (loss) from continuing operations                  | \$ (0.65)                         | \$ (0.44)  | \$ (6.12)                       | \$ (2.12)  | \$ (4.21)  |
| Discontinued operations (1)                               | 0.12                              | 0.34       | (0.04)                          | 19.34      | 1.84       |
| Net income (loss)   | \$ (0.53)                         | \$ (0.10)  | \$ (6.16)                       | \$ 17.22   | \$ (2.37)  |
| Weighted average number of common shares                  |                                   |            |                                 |            |            |
|   | 19,613,201                        | 18,862,751 | 15,917,570                      | 16,354,121 | 13,436,421 |

**Table of Contents**

|  | 2010      | 2009      | December 31,<br>2008<br>(in thousands) | 2007      | 2006       |
|--|-----------|-----------|--|-----------|------------|
| <b>Consolidated Balance Sheet Data:</b>  |           |           |  |           |            |
| Cash, cash equivalents, short-term investments and restricted cash and investments             | \$ 24,038 | \$ 54,694 | \$ 82,012                              | \$ 95,819 | \$ 212,488 |
| Working capital (3)  | 3,531     | 15,994    | 23,315                                 | 58,975    | 64,747     |
| Total assets   | 75,559    | 141,807   | 171,448                                | 173,278   | 326,053    |
| Current portion of deferred revenue, net   |           | 4,989     | 10,301                                 |           | 57,981     |
| Current portion of deferred gain   | 1,702     | 1,702     | 1,964                                  | 1,964     | 1,964      |
| Long-term obligations (excludes long-term portions of deferred revenue, net and deferred gain) | 36,030    | 72,350    | 58,743                                 | 53,048    | 85,780     |
| Long-term portion of deferred revenue, net   | 2,546     | 3,495     | 16,819                                 | 2,546     | 2,546      |
| Long-term portion of deferred gain   |           | 1,702     | 23,292                                 | 25,256    | 27,220     |
| Common stock subject to conditional redemption   | 8,344     | 8,344     | 12,345                                 | 12,345    | 12,345     |
| Accumulated deficit  | (691,947) | (681,574) | (679,626)                              | (581,512) | (862,802)  |
| Total stockholders' equity (deficit)   | (4,849)   | 3,744     | (10,365)                               | 29,115    | 27,352     |

- (1) We sold our Oncology Product Line ( Oncology ) on October 25, 2006 and our AVINZA Product Line ( AVINZA ) on February 26, 2007. The operating results for Oncology and AVINZA have been presented in our consolidated statements of operations as Discontinued Operations.
- (2) Effective January 1, 2006, we adopted ASC 718, Compensation - Stock Compensation, or ASC 718, using the modified prospective transition method. The implementation of ASC 718 resulted in additional employee stock compensation expense of \$4.8 million in 2006.
- (3) Working capital includes deferred product revenue recorded under the sell-through revenue recognition method.

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**Table of Contents**

**Item 7. 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 Item 1A. Risk Factors. This outlook represents our current judgment on the future direction of our business. These statements include those related to our Captisol related revenue, our AVINZA, PROMACTA and other product royalty revenues, product returns, and product development. Actual events or results may differ materially from our expectations. For example, there can be no assurance that our revenues or expenses will meet any expectations or follow any trend(s), that we will be able to retain our key employees or that we will be able to enter into any strategic partnerships or other transactions. We cannot assure you that we will receive expected AVINZA, PROMACTA, Captisol and other product revenues to support our ongoing business or that our internal or partnered pipeline products will progress in their development, gain marketing approval or achieve success in the market. In addition, ongoing or future arbitration, or litigation or disputes with third parties may have a material adverse effect on us. Such risks and uncertainties, and others, could cause actual results to differ materially from any future performance suggested. We undertake no obligation to release publicly the results of any revisions to these forward-looking statements to reflect events or circumstances arising after the date of this annual 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 annual report belongs to its owner.*

References to Ligand Pharmaceuticals Incorporated, Ligand, the Company, we or our include our wholly owned subsidiaries Ligand JVR, Allergan Ligand Retinoid Therapeutics, Seragen, Inc., or Seragen; Pharmacopeia, LLC; Neurogen Corporation, CyDex Pharmaceuticals, Inc., Metabasis Therapeutics, and Nexus Equity VI LLC, or Nexus.

**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 our business model is based on the goal of partnering with other pharmaceutical companies to commercialize and market our assets, the revenue that supports our business is based largely on payments made to us by partners for royalties, milestones, license fees, and material sales of Captisol. We expect to receive revenue from eight partner-marketed products in 2011 and have a portfolio of over fifty additional programs that are in various stages of development with the potential to become future revenue generating assets. This portfolio of assets is highly diversified across numerous technology types, therapeutic areas, drug targets, and industry partners, offering investors a unique and, we believe, lower risk portfolio opportunity in which to invest in the increasingly complicated and unpredictable pharmaceutical industry. These programs address the unmet medical needs of patients for a broad spectrum of diseases including hepatitis, muscle wasting, Alzheimer's disease, dyslipidemia, diabetes, anemia, COPD, asthma, rheumatoid arthritis, oncology and osteoporosis. We have established multiple alliances with the world's leading pharmaceutical companies including GlaxoSmithKline, Merck, Pfizer, Bristol-Myers Squibb, Onyx, and AstraZeneca.

On September 7, 2006, we announced the sale of ONTAK, Targretin capsules, Targretin gel, and Panretin gel to Eisai, Inc., or Eisai, and the sale of AVINZA to King Pharmaceuticals, Inc., or King. The Eisai sales transaction subsequently closed on October 25, 2006. The AVINZA sale transaction subsequently closed on February 26, 2007. Accordingly, the results for the Oncology and AVINZA Product Lines have been presented in our consolidated statements of operations as Discontinued Operations.

On December 23, 2008, we acquired all of the outstanding common shares of Pharmacopeia, Inc., or Pharmacopeia, a clinical development stage biopharmaceutical company dedicated to discovering and developing novel small molecule therapeutics to address significant medical needs.

## **Table of Contents**

On December 23, 2009, we acquired all of the outstanding common shares of Neurogen Corporation, or Neurogen, a drug development company historically focusing on small-molecule drugs to improve the lives of patients suffering from psychiatric and neurological disorders with significant unmet medical needs.

On January 27, 2010, we completed the acquisition of Metabasis Therapeutics, Inc., or Metabasis, following approval of the transaction by Metabasis stockholders. As a result, we gained a fully funded partnership with Hoffman-La Roch, or Roche, additional pipeline assets and drug discovery technologies and resources.

On January 26, 2011, we completed the acquisition of CyDex Pharmaceuticals, Inc., or CyDex, following approval of the transaction by CyDex stockholders. As a result, we gained revenue from four currently marketed products, a large portfolio of partnered drug development programs, an internal pipeline of proprietary drugs, and the Captisol drug formulation platform technology.

### **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 proceeds from Metabasis partnership with Roche or the sale or partnering of any of the Metabasis drug development programs, among other triggering events. We have also committed to spend at least \$8 million in new research and development funding on the Metabasis programs within 42 months following the closing of the transaction. Through December 31, 2010, we estimate that we have spent approximately \$3.5 million of the committed amount.

In April 2010, we earned a \$6.5 million milestone payment from Roche as a result of Roche progressing RG7348 into a Phase I clinical trial for the treatment of hepatitis C viral (HCV) infection. The milestone payment arises from a 2008 collaboration and license agreement between Roche and Metabasis, and approximately 65% was distributed to CVR holders in June 2010.

In November 2010, we received a notice from Roche providing that Roche was exercising its right to terminate the Collaboration and License Agreement dated as of August 7, 2008 among Roche and Metabasis. Under the terms of the Collaboration and License Agreement, the termination was effective upon 60 days prior written notice. Upon termination, the licenses granted under the agreement automatically terminated and reverted to the granting party. In addition, we will receive a non-exclusive, worldwide, royalty-bearing license under specified Roche patents to develop, make and sell related compounds and products, subject to royalty payments on net sales. Any future assignment or sublicensing of such a license from Roche may be subject to Roche's prior written consent. Roche will be prohibited for ten years following the termination from developing or commercializing related compounds.

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 received a 10% equity position in Chiva and will also receive a portion of any sublicensing revenue generated from sublicensing of collaboration compounds to third parties in a major world market. We will receive initial 2011 license payments that total \$1 million.

**Table of Contents****Results of Operations**

Total revenues for 2010 were \$23.5 million, compared to \$38.9 million in 2009 and \$27.3 million in 2008. Our loss from continuing operations for 2010 was \$12.8 million, or \$0.65 per share, compared to \$8.3 million, or \$0.44 per share in 2009 and \$97.5 million, or \$6.12 per share, in 2008.

*Royalty Revenue*

Royalty revenues were \$7.3 million in 2010 compared to \$8.3 million in 2009 and \$20.3 million in 2008. The decrease in royalty revenues of \$1.0 million for the year ended December 31, 2010 is primarily due to lower AVINZA sales, partially offset by an increase in PROMACTA sales. The decrease in royalty revenues of \$12.0 million for the year ended December 31, 2009 is primarily due to a reduction in the contractual royalty rate from 15% to 5% in October 2008 under our agreement with King for AVINZA sales, partially offset by PROMACTA royalties.

*Collaborative Research and Development and Other Revenue*

Collaborative research and development and other revenues for 2010 were \$16.3 million compared to \$30.6 million in 2009 and \$7.0 million in 2008. Collaborative research and development and other revenues include reimbursement for ongoing research activities, earned milestones, and recognition of prior years' up-front fees previously deferred.

A comparison of collaborative research and development and other revenues is as follows (in thousands):

|  | Year Ended December 31, |           |          |
|--|-------------------------|-----------|----------|
|  | 2010                    | 2009      | 2008     |
| Collaborative research and development | \$ 7,734                | \$ 23,316 | \$       |
| License fees                           | 6,250                   | 525       | 5,000    |
| Milestones and other                   | 2,275                   | 6,765     | 2,000    |
|  | \$ 16,259               | \$ 30,606 | \$ 7,000 |

*Collaborative research and development.* The decrease of \$15.6 million for the year ended December 31, 2010 is primarily due to the termination of our remaining research collaboration agreements. The increase of \$23.3 million for the year ended December 31, 2009 is due to collaboration revenues resulting from agreements acquired from Pharmacepia in December 2008.

*License fees.* The increase of \$5.7 million for the year ended December 31, 2010 is primarily due to the licensing of several compounds upon the termination of research collaborations. License fees decreased \$4.5 million for the year ended December 31, 2009 as, during 2008, we received a \$5.0 million up-front license fee from an agreement with GSK under which we licensed worldwide exclusive rights to our LGD-4665 product candidate and our other thrombopoietin (TPO)-related molecules to GSK.

*Milestones and Other.* Milestones in 2010 reflect \$2.3 million received from Roche related to the initiation of a Phase I clinical trial under an agreement acquired from Metabasis. Milestones in 2009 reflect \$4.0 million received from Merck in connection with lead identification and transferred programs, \$1.3 million received from GSK for lead identification and \$1.5 million from Pfizer related to NDA filings. Milestones in 2008 reflect \$2.0 million received from GSK as a result of FDA approval of PROMACTA.

**Table of Contents***Research and Development Expenses*

Research and development expenses were \$22.1 million in 2010 compared to \$39.9 million in 2009 and \$30.8 million in 2008. The major components of research and development expenses are as follows (in thousands):

|   | Years Ended December 31, |                  |                  |
|---|--------------------------|------------------|------------------|
|   | 2010                     | 2009             | 2008             |
| Research performed under collaboration agreements | \$ 8,670                 | \$ 21,194        | \$               |
| Internal research programs                        | 10,877                   | 12,963           | 21,626           |
| <b>Total research</b>                             | <b>19,547</b>            | <b>34,157</b>    | <b>21,626</b>    |
| Development costs                                 | 2,520                    | 5,713            | 9,144            |
| <b>Total research and development</b>             | <b>\$ 22,067</b>         | <b>\$ 39,870</b> | <b>\$ 30,770</b> |

The decrease in research and development expenses of \$17.8 million for the year ended December 31, 2010 was primarily due to \$12.5 million of costs associated with collaboration agreements that were terminated, \$3.2 million of costs associated with clinical trials and \$1.8 million in reduced headcount related and other costs associated with internal research programs.

The increase in research and development expenses of \$9.1 million for the year ended December 31, 2009 was primarily due to \$21.2 million of costs associated with servicing our collaboration agreements, partially offset by a \$7.0 million reduction in litigation settlement costs as the result of a settlement agreement and mutual release we entered into with The Rockefeller University, or Rockefeller, in 2008, \$2.0 million in reduced consulting and outside service costs associated with internal research programs, and a \$3.0 million reduction in costs associated with clinical trials.

As summarized in the table below, we are developing several proprietary products for a variety of indications. These programs represent our 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 Clopidogrel IV                           | Anti-platelet              | Phase II          |
| Captisol-Enabled Melphalan I                              | Oncology                   | Phase II          |
| 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 of 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. Risks Factors for additional discussion of the uncertainties surrounding our research and development initiatives.

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**Table of Contents**

*General and Administrative Expenses*

General and administrative expenses were \$12.8 million for 2010, compared to \$15.2 million for 2009 and \$23.8 million for 2008. The decrease in general and administrative expenses of \$2.4 million for the year ended December 31, 2010 was primarily due to \$0.9 million of lower headcount related costs as a result of staff reductions, \$3.9 million of lower facilities costs as a result of our lease termination in 2009 and \$1.4 million of lower legal costs, partially offset by lower allocations to research and development of \$3.5 million.

The decrease in general and administrative expenses of \$8.6 million for the year ended December 31, 2009 was primarily due to \$4.3 million of expenses incurred during 2008 as a result of exiting a facility, reduced legal expenses of \$3.3 million and lower headcount costs of \$0.6 million.

*Lease Exit and Termination Costs*

In September 2010, we ceased use of our facility located in Cranbury, New Jersey. As a result, 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. We also recorded approximately \$1.8 million of severance related costs.

In August 2009, we entered into a lease termination agreement for our corporate facility in San Diego. Under the terms of the agreement, we will pay a termination fee of \$14.3 million as follows: \$4.5 million was paid upon signing, \$4.5 million was paid in July 2010 and \$5.3 million is due in April 2011. As a result, during the year ended December 31, 2009, we recorded lease termination costs of \$15.2 million, which includes the net present value of the lease termination payments of \$14.3 million and \$0.9 million of other costs associated with the lease termination.

*Write-off of in-process research and development*

In November 2010, Roche notified us that they were exercising their right to terminate the collaboration and license agreement with our subsidiary, Metabasis. As a result, we reviewed the carrying amount of the intangible asset related to this agreement. Based on our analysis of available information, we determined that the asset would not generate any future cash flow. Therefore, we wrote-off the \$2.8 million of acquired in-process research and development associated with the agreement during the year ended December 31, 2010.

For acquisitions prior to January 1, 2009, the fair value of acquired In-Process Research and Development (IPR&D) projects, which have no alternative future use and which have not reached technological feasibility at the date of acquisition, were immediately expensed. We wrote-off the estimated fair value of \$72.0 million of acquired in-process research and development related to the acquisition of Pharmacoepia in 2008. The estimated fair value relates to specific internal and partnered product candidates targeting a variety of indications which are currently in various stages of development ranging from preclinical to Phase II. Due to the nature of our internal development programs and our collaborative partnerships, management does not expect to incur significant costs related to these programs. The estimated fair value is driven by future milestones and royalties. Management anticipates potential milestones in the near-term and the possibility of significant royalties beginning in 2015. However, as these potential products have not reached commercialization, we or our partners face risks inherent in the development of products in the human health care market and will continue to face significant risks as no assurance can be given that: (1) product development efforts will be successful, (2) required regulatory approvals for any indication will be obtained, (3) any products, if introduced, will be capable of being produced in commercial quantities at reasonable costs or, (4) patient and physician acceptance of these products will be achieved. These risks may cause significant delays in the timing or potential success of commercialization of



## **Table of Contents**

these products, which could materially impact estimated future cash flows. Of the total fair value, \$29.0 million relates to product candidates currently in the preclinical stage of development as follows: \$13.0 million related to various candidates under our collaboration with GSK, \$8.0 million related to the JAK-3 program with Wyeth, and \$8.0 related to our internal CCR1 program; \$9.0 million relates to product candidates currently in Phase I clinical trials as follows: \$7.5 million related to Schering Plough oncology-related product candidates and \$1.5 million related to a product candidate being developed by Celgene targeting inflammation; and \$34.0 million relates to product candidates currently in Phase II clinical trials as follows: \$19.0 million related to Schering Plough's CXCR2 program targeting COPD and asthma and \$15.0 million related to a P38 MAPK inhibitor program targeting rheumatoid arthritis and psoriasis being developed by BMS.

We used the Income Method to determine the estimated fair values of acquired in-process research and development, which uses a discounted cash flow model and applies a probability weighting based on estimates of successful product development and commercialization to estimated future net cash flows resulting from projected revenues and related costs. These success rates take 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 40% for product candidates in the preclinical stage, 35% for product candidates currently in Phase I clinical trials and 30% for product candidates currently in Phase II clinical trials.

The above assumptions were used solely for the purposes of estimating fair values of these product candidates as of the date of their acquisition. However, we cannot provide assurance that the underlying assumptions used to forecast the cash flows or the timely and successful completion of development and commercialization will materialize, as estimated. Consequently, the eventual realized value of the acquired in-process research and development may vary from its estimated value at the date of acquisition.

As a result of adjustments to our purchase price allocation related to our acquisition of Pharmacoepia, we wrote-off an additional \$0.4 million of acquired in-process research and development during the year ended December 31, 2009.

### *Accretion of Deferred Gain on Sale Leaseback*

In October 2006, we entered into an agreement for the sale of our real property located in San Diego, California for a purchase price of \$47.6 million. This property, with a net book value of \$14.5 million, included one building totaling approximately 82,500 square feet, the land on which the building is situated, and two adjacent vacant lots. As part of the sale transaction, we agreed to lease back the building for a period of 15 years.

We recognized an immediate pre-tax gain on the sale transaction of \$3.1 million in 2006 and deferred a gain of \$29.5 million on the sale of the building. The deferred gain was being recognized as an offset to operating expense 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 an additional \$20.4 million of accretion of deferred gain during the quarter ended September 30, 2009, and will recognize the remaining balance of the deferred gain of \$3.1 million through the term of our new building lease, which expires in December 2011. The amount of the deferred gain recognized for the years ended December 31, 2010, 2009 and 2008 was \$1.7 million, \$21.9 million and \$2.0 million, respectively.

### *Interest Income*

Interest income was \$0.4 million for 2010, compared to \$0.6 million for 2009 and \$2.1 million for 2008. The decreases from 2008 to 2009 and from 2009 to 2010 are due to lower invested balances and lower interest rates.

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**Table of Contents**

*Decrease in Liability for Contingent Value Rights*

We recorded a decrease in liability for CVRs of \$9.1 million for the year ended December 31, 2010. The decrease 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. The fair value of the liability at December 31, 2010 was \$0, compared to \$9.1 million at the date of acquisition.

*Other, net*

We recorded other income of \$4.4 million for 2010, compared to other expense of \$0.2 million for 2009 and \$2.2 million for 2008. Other income for 2010 primarily relates to grants totaling \$2.0 million in response to applications submitted for qualified investments in a qualifying therapeutic discovery project under section 48D of the Internal Revenue Code, \$1.5 million in realized gains on investments, \$0.5 million reduction in warrant liability and \$0.4 million of gain on sale of property and equipment. Other expense for 2009 relates to losses from abandoning property and equipment. Other expense for 2008 relates to realized losses on investments.

*Income Taxes*

During 2010, we recorded an income tax benefit of \$2.6 million related to the reversal of estimated interest for a proposed substantial underpayment of tax in fiscal 2007. During 2009, the IRS issued to us a Notice of Proposed Adjustment, or NOPA, seeking an increase to our taxable income for the 2007 fiscal year of \$71.5 million and a \$4.1 million penalty for substantial underpayment of tax in fiscal 2007. We recorded a liability for uncertain tax positions of \$25.1 million related to the income tax effect of the NOPA and \$3.0 million related to estimated interest due on the proposed underpayment of tax. We also recorded deferred income tax assets of \$25.1 million associated with the ability to carry back losses from 2008 and 2009 to offset the NOPA. In addition, we recorded an income tax receivable of \$4.5 million associated with changes in income tax law in relation to prior AMT taxes paid on carry back periods. In November 2010, the IRS granted us an extension of time to make a closing-of-the-books election with respect to an ownership change, within the meaning of section 382 of the Internal Revenue Code, for the 2007 tax year. We filed an amended 2007 federal tax return in the fourth quarter of 2010. In addition, in January 2011, we were notified by the IRS that they had completed their examination resulting in no changes to the taxes for our 2007 tax year.

During 2009, we recorded an income tax benefit of \$1.5 million as a result of the NOPA discussed above. We recorded an income tax receivable of \$4.5 million associated with changes in income tax law in relation to prior AMT taxes paid on carry back periods partially offset by \$3.0 million of interest for the proposed substantial underpayment of tax in fiscal 2007.

During 2008, we had losses from continuing operations and discontinued operations. We recorded an income tax benefit from continuing operations of \$0.1 million for the year ended December 31, 2008 related to tax refunds.

At December 31, 2010, we have federal net operating loss carryforwards of \$438.2 million, \$181.1 million of state net operating loss carryforwards and \$16.4 million of federal research and development credit carryforwards. Federal research and development credit carryforwards of \$0.8 million expired at the beginning of 2011 with the remainder expiring through 2027, and we have \$10.3 million of California and New Jersey research and development credit carryforwards that have no expiration date.

## **Table of Contents**

Pursuant to Internal Revenue Code Sections 382 and 383, use of net operating loss and credit carryforwards may be limited if there were changes in ownership of more than 50%. As a result of ownership changes, utilization of our net operating losses and credits are subject to limitations under Internal Revenue Code Sections 382 and 383.

### *Discontinued Operations*

#### *Oncology Product Line*

In 2006, we and Eisai entered into the Oncology purchase agreement pursuant to which Eisai agreed to acquire all of our worldwide rights in and to our oncology products, or Oncology product line, including, among other things, all related inventory, equipment, records and intellectual property, and assume certain liabilities as set forth in the Oncology purchase agreement. For the years ended December 31, 2010 and 2009, we recognized pre-tax gains of \$0.2 million and \$1.0 million, respectively, due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date. For the year ended December 31, 2008, we recognized a \$10.6 million pre-tax loss resulting from the Salk settlement for \$13.0 million partially offset by a \$2.4 million pre-tax gain due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date.

#### *AVINZA Product Line*

In 2007, we and King entered into 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. In 2008, the remaining \$7.5 million from an escrow account, plus interest of \$0.5 million, was released to us.

King also assumed our co-promote termination obligation to make payments to Organon based on net sales of AVINZA (\$30.9 million and \$40.8 million as of December 31, 2010 and 2009, respectively). As Organon has not consented to the legal assignment of the co-promote termination obligation from us to King, we remain liable to Organon in the event of King's default of this obligation. For the years ended December 31, 2010 and 2009, we recognized pre-tax gains of \$2.2 million and \$5.4 million, respectively, due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date. For the year ended December 31, 2008, we recognized an \$8.1 million pre-tax gain resulting from the release of funds from the escrow account and a \$1.5 million pre-tax gain due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date.

### *Income Taxes*

For the years ended December 31, 2010 and 2009, we recorded no income tax provision or benefit on discontinued operations.

For the year ended December 31, 2008, we recorded an income tax benefit on discontinued operations of \$0.4 million, which related to state tax refunds for taxes paid in 2007.

## **Liquidity and Capital Resources**

We have financed our operations through offerings of our equity securities, issuance of convertible notes, product sales and the subsequent sales of our commercial assets, royalties, collaborative research and development and other revenues, capital and operating lease transactions, accounts receivable factoring and equipment financing arrangements and investment income.

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**Table of Contents**

Working capital was \$3.5 million at December 31, 2010 compared to \$16.0 million at December 31, 2009. Available cash, cash equivalents and short-term investments totaled \$22.7 million as of December 31, 2010 compared to \$53.2 million as of December 31, 2009. We primarily invest our cash in certificates of deposit and United States government and investment grade corporate debt securities.

In August 2009, we entered into a lease termination agreement for our corporate facility in San Diego. Under the terms of the agreement, we will pay a termination fee of \$14.3 million as follows: \$4.5 million was paid upon signing, \$4.5 million was paid in July 2010 and \$5.3 million is due in April 2011. In addition, we entered into a new lease for a period of 27 months commencing October 2009, for premises consisting of office and lab space located in San Diego to serve as our new corporate headquarters.

In January 2011, we used \$12.0 million of our existing cash, cash equivalents and short-term investments for the acquisition of CyDex.

Based on management's plans, including expense reductions, if necessary, and our current business outlook, 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 AVINZA, VIVANT, CONBRIZA and PROMACTA; 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.

*Operating Activities*

Operating activities used cash of \$27.1 million, \$33.8 million, and \$20.6 million in 2010, 2009 and 2008, respectively. The use of cash in 2010 reflects a net loss of \$10.4 million, adjusted by \$2.4 million of gain from discontinued operations and \$10.2 million of non-cash items to reconcile the net loss to net cash used in operations. These reconciling items primarily reflect non-cash lease costs of \$9.0 million, a write-off of acquired in-process research and development of \$2.8 million, the recognition of \$2.3 million of stock-based compensation expense, depreciation of assets of \$2.2 million and the write-off of assets of \$5.3 million, partially offset by the change in estimated fair value of contingent value rights of \$9.1 million, accretion of deferred gain on the sale leaseback of the building of \$1.7 million and gain on investments of \$0.6 million. The use of cash in 2010 is further impacted by changes in operating assets and liabilities due primarily to decreases in accounts payable and accrued liabilities of \$13.4 million, a decrease in deferred revenue of \$5.9 million, an increase in other current assets of \$3.9 million, a decrease in other liabilities of \$0.7 million and an increase in accounts receivable, net of \$0.4 million. Net cash provided by operating activities of discontinued operations was \$0.2 million in 2010.

The use of cash in 2009 reflects a net loss of \$1.9 million, adjusted by \$7.9 million of gain from discontinued operations and \$4.0 million of non-cash items to reconcile the net loss to net cash used in operations. These reconciling items primarily reflect the accretion of deferred gain on the sale leaseback of the building of \$21.9 million, non-cash development milestone revenue of \$0.9 million and gain on investments of \$0.2 million, partially offset by non-cash lease costs of \$9.8 million, a write-off of acquired in-process research and development of \$0.4 million, non-cash exit and restructuring costs of \$0.3 million, the recognition of \$3.4 million of stock-based compensation expense, depreciation of assets of \$3.1 million, impairment and amortization of acquired intangible assets of \$1.5 million, and the write-off of assets of \$0.5 million. The use of cash in 2009 is further impacted by changes in operating assets and liabilities due primarily to decreases in accounts payable and accrued liabilities of \$11.0 million, a decrease in deferred revenue of \$14.3 million, a decrease in other liabilities of \$2.3 million and an increase in accounts receivable, net of \$0.6 million. These

## **Table of Contents**

increases were partially offset by decreases in other current assets of \$1.1 million and the release of the restricted indemnity account of \$10.3 million. Net cash used in operating activities of discontinued operations was \$3.2 million in 2009.

The use of cash in 2008 reflects a net loss of \$98.1 million, adjusted by \$0.7 million of loss from discontinued operations and \$82.7 million of non-cash items to reconcile the net loss to net cash used in operations. These reconciling items primarily reflect the write-off of acquired in-process research and development of \$72.0 million, non-cash exit and restructuring costs of \$5.3 million, the recognition of \$3.6 million of stock-based compensation expense, depreciation of assets of \$1.1 million, realized loss on investment of \$2.0 million, and the write-off of assets of \$0.7 million, partially offset by the accretion of deferred gain on the sale leaseback of the building of \$2.0 million. The use of cash in 2008 is further impacted by changes in operating assets and liabilities due primarily to decreases in accounts payable and accrued liabilities of \$7.3 million partially offset by decreases in other current assets of \$4.9 million and an increase in other liabilities of \$1.3 million. Net cash used in operating activities of discontinued operations was \$4.6 million in 2008.

### *Investing Activities*

Investing activities provided cash of \$14.5 million in 2010 and \$24.8 million in 2009 and used cash of \$24.4 million 2008. Cash provided by investing activities in 2010 primarily reflects the net sales of short-term investments of \$18.5 million and \$0.6 million of proceeds from sale of property and equipment, partially offset by \$4.1 million of cash paid for acquisitions. None of the cash provided by investing activities for 2010 related to discontinued operations.

Cash provided by investing activities in 2009 primarily reflects the net sales of short-term investments of \$15.0 million and \$9.8 million of net cash acquired from our merger with Neurogen. None of the cash provided by investing activities for 2009 related to discontinued operations.

Cash used in investing activities in 2008 primarily reflects the net purchases of short-term investments of \$36.4 million partially offset by \$4.1 million of net cash acquired from our merger with Pharmacoepia. Net cash provided by investing activities of discontinued operations was \$8.1 million in 2008.

### *Financing Activities*

Financing activities used cash of \$0.2 million, \$3.7 million and \$3.0 million in 2010, 2009 and 2008, respectively. Cash used in financing activities in 2010 primarily reflects payments under equipment financing obligations of \$0.1 million and repurchases of common stock of \$0.1 million. None of the cash used in financing activities for 2010 related to discontinued operations.

Cash used in financing activities in 2009 primarily reflects payments under equipment financing obligations of \$0.5 million and the repayment of debt of \$3.4 million related to an equipment line of credit acquired from Pharmacoepia that was paid off in January 2009, partially offset by proceeds from the issuance of common stock of \$0.2 million. None of the cash used in financing activities for 2009 related to discontinued operations.

Cash used in financing activities in 2008 primarily reflects repurchase of our common stock of \$1.6 million and payments under equipment financing obligations of \$1.5 million. None of the cash used in financing activities for 2008 related to discontinued operations.

### *Other*

As part of certain of our strategic alliances with our research partners, we have received up-front cash payments and licenses to certain product candidates. In connection with these agreements, we were obligated to perform significant research and development activities over multiple years. As of December 31, 2010, we had no remaining obligations to perform research and development activities under these agreements.

**Table of Contents**

In July 2007, we purchased \$5.0 million of commercial paper issued by Golden Key Ltd. The investment was highly-rated and within our investment policy at the time of purchase, but during the third quarter of 2007, large credit rating agencies downgraded the quality of this security. In addition, as a result of not meeting certain liquidity covenants, the assets of Golden Key Ltd. were assigned to a trustee who established a committee of the largest senior credit holders to determine the next steps. Subsequently, Golden Key Ltd. defaulted on its obligation to settle the security on the stated maturity date of October 10, 2007. During 2010, the assets of Golden Key Ltd. were sold through an auction process and, as a result, the Company received a final cash distribution of approximately \$2.9 million, of which \$1.4 million was recognized as a gain.

In connection with the acquisition of Pharmacoepia on December 23, 2008, Pharmacoepia security holders received a contingent value right that entitles them to an aggregate cash payment of \$15.0 million under certain circumstances. At December 31, 2010 and 2009, our management deemed, based on available information, that the likelihood of payment was not determinable beyond a reasonable doubt and, therefore, no liability has been recorded.

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 December 31, 2010 and 2009, the aggregate fair values of the Aplindore, VR1 and H3 CVR s were \$0.7 million and \$0.7 million, respectively, 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 December 31, 2010 was \$0.

*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 December 31, 2010 and 2009.

*Contractual Obligations*

As of December 31, 2010, future minimum payments due under our contractual obligations are as follows (in thousands):

|                                      | Payments Due by Period |                  |           |           |                   |
|--------------------------------------|------------------------|------------------|-----------|-----------|-------------------|
|                                      | Total                  | Less than 1 year | 1-3 years | 3-5 years | More than 5 years |
| Operating lease obligations (1)      | \$ 26,566              | \$ 6,032         | \$ 9,719  | \$ 9,004  | \$ 1,811          |
| Consulting / License Agreements      | 265                    | 265              |           |           |                   |
| Co-promote termination liability (2) |                        |                  |           |           |                   |
| Total contractual obligations        | \$ 26,831              | \$ 6,297         | \$ 9,719  | \$ 9,004  | \$ 1,811          |

- (1) We lease an office and research facility under an operating lease arrangement through July 2015. Commencing January 2008, we sublet this facility through July 2015. The sublease agreement provides for a 3% increase in annual rents. As of December 31, 2010, we expect to receive aggregate future minimum lease payments totaling \$4.4 million (nondiscounted) over the duration of the sublease agreement as follows and not included in the table above: less than one year, \$0.9 million; one to three years, \$2.0 million; three to five years, \$1.5 million; and more than five years, \$0.
- (2) Our co-promote termination obligation to Organon was assumed by King pursuant to the AVINZA purchase agreement. However, as Organon did not consent to the legal assignment of the obligation to King, we remain liable to Organon in the event of King s default of the obligation. As of December 31, 2010, the total estimated amount of the obligation is \$48.1 million on an undiscounted basis. We do not expect to make any cash payments related to this obligation.



## **Table of Contents**

As of December 31, 2010, we have net open purchase orders (defined as total open purchase orders less any accruals or invoices charged to or amounts paid against such purchase orders) totaling approximately \$2.4 million. We do not plan to spend any significant amounts on capital expenditures during 2011. In addition, under the terms of our merger with Metabasis, we are committed to spend at least \$8.0 million in new research and development funding on the Metabasis programs within 42 months following the closing of the transaction. Through December 31, 2010, we estimate that we have spent approximately \$3.5 million of the committed amount.

On June 15, 2010, we committed to a plan to close our operations at our Cranbury, New Jersey facility, with an expected completion in the fourth quarter of 2010. In September 2010, we ceased use of this facility. As a result, during 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.

## **Critical Accounting Policies**

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

### *Revenue Recognition*

Royalties on sales of AVINZA, VIVIAN, CONBRIZA and PROMACTA are recognized in the quarter reported by the respective partner.

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

Nonrefundable, up-front license fees and milestone payments with standalone value that are not dependent on any future performance by us under our collaboration agreements are recognized as revenue upon the earlier of when payments are received or collection is assured, but are deferred if we have continuing performance obligations. Amounts received under multiple-element arrangements requiring ongoing services or performance by us are recognized over the period of such services or performance.

Revenue from milestones is 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 we have no further performance obligations relating to that event, and (ii) collectibility is reasonably assured. If these criteria are not met, the milestone payment is recognized over the remaining period of our performance obligations under the arrangement.

### *Co-Promote Termination Accounting*

As part of the termination and return of co-promotion rights agreement that we entered into with Organon in January 2006, we agreed to make quarterly payments to Organon, effective for the fourth quarter of 2006, equal to 6.5% of AVINZA net sales through December 31, 2012 and thereafter 6% through patent expiration, currently anticipated to be November 2017. The estimated fair value of the amounts to be paid to Organon after the termination (\$95.2 million as of January 2006), based on the future estimated net sales of the product, was recognized as a liability and expensed as a cost of the termination as of the effective date of the agreement, January 2006.



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**Table of Contents**

In connection with the AVINZA sale transaction, King assumed our obligation to make payments to Organon based on net sales of AVINZA (the fair value of which approximated \$30.9 million as of December 31, 2010). As Organon has not consented to the legal assignment of the co-promote termination obligation from us to King, we remain liable to Organon in the event of King's default of this obligation. Therefore, we recorded an asset on February 26, 2007 to recognize King's assumption of the obligation, while continuing to carry the co-promote termination liability in our consolidated financial statements to recognize our 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. As of December 31, 2010 and thereafter, the receivable and liability will remain equal and adjusted each quarter for changes in the fair value of the obligation. On a quarterly basis, management reviews the carrying value and assesses the co-promote termination receivable for impairment (e.g. in the event King defaults on the assumed obligation to pay Organon). Annually management also 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 amount of the asset and liability for a particular period may be materially different from current estimates. Any resulting changes to the co-promote termination liability will have a corresponding impact on the co-promote termination payments receivable. As of December 31, 2010 and 2009, the fair value of the co-promote termination liability (and the corresponding receivable) was determined using a discount rate of 15%.

*Impairment of Long-Lived Assets*

We review long-lived assets for impairment annually or whenever events or circumstances indicate that the carrying amount of the assets may not be recoverable. We measure the recoverability of assets to be held and used by comparing 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 of our long-lived assets is determined using the expected cash flows discounted at a rate commensurate with the risk involved. As of December 31, 2010, we believe that the future undiscounted cash flows to be received from our long-lived assets will exceed the assets' carrying value.

*Income Taxes*

Income taxes are accounted for under the liability method. This approach requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of differences between the tax basis of assets or liabilities and their carrying amounts in the consolidated financial statements. A valuation allowance is provided for deferred tax assets if it is more likely than not that these items will either expire before we are able to realize their benefit or if future deductibility is uncertain. During 2009, the IRS issued to us a Notice of Proposed Adjustment, or NOPA, seeking an increase to our taxable income for the 2007 fiscal year of \$71.5 million and a \$4.1 million penalty for substantial underpayment of tax in fiscal 2007. We recorded a liability for uncertain tax positions of \$25.1 million related to the income tax effect of the NOPA and \$3.0 million related to estimated interest due on the proposed underpayment of tax. We also recorded deferred income tax assets of \$25.1 million associated with the ability to carry back losses from 2008 and 2009 to offset the NOPA. In addition, we recorded an income tax receivable of \$4.5 million associated with changes in income tax law in relation to prior AMT taxes paid on carry back periods. In November 2010, the IRS granted us an extension of time to make a closing-of-the-books election with respect to an ownership change, within the meaning of section 382 of the Internal Revenue Code, for the 2007 tax year. We filed an amended 2007 federal tax return in the fourth quarter of 2010. In January 2011, we were notified by the IRS that they had completed their examination resulting in no changes to the taxes for our 2007 tax year. As of December 31, 2010, we have provided a full valuation allowance against our deferred tax assets as recoverability was uncertain. Developing the provision for income taxes requires significant judgment and expertise in federal and state income tax laws, regulations and strategies, including the determination of deferred tax assets and liabilities and, if necessary, any valuation allowances that may be required for deferred tax assets. Our judgments and tax strategies are subject to audit by various taxing authorities. While we believe we have provided adequately for our income tax liabilities in our consolidated

**Table of Contents**

financial statements, adverse determinations by these taxing authorities could have a material adverse effect on our consolidated financial condition and results of operations.

*Stock-Based Compensation*

Stock-based compensation cost 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. We recognized compensation expense of \$2.3 million, \$3.4 million and \$3.6 million for 2010, 2009 and 2008, respectively, associated with option awards, restricted stock and an equitable adjustment of employee stock options.

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:

|                         | Years Ended December 31, |         |         |
|-------------------------|--------------------------|---------|---------|
|                         | 2010                     | 2009    | 2008    |
| Risk-free interest rate | 2.7%                     | 2.1%    | 3.0%    |
| Dividend yield          |                          |         |         |
| Expected volatility     | 72%                      | 74%     | 65%     |
| Expected term           | 6 years                  | 6 years | 6 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, we used the historical volatility of our stock price over a period equal to the expected term. Changes in the assumptions used to estimate the fair value of stock-based compensation would impact the amount of compensation expenses recognized during the period.

**New Accounting Pronouncements**

In October 2009, the FASB issued Accounting Standards Update (ASU) No. 2009-13, Multiple-Deliverable Revenue Arrangements, or ASU 2009-13, which amends existing revenue recognition accounting pronouncements that are currently within the scope of ASC 605. This guidance eliminates the requirement to establish the fair value of undelivered products and services and instead provides for separate revenue recognition based upon management's estimate of the selling price for an undelivered item when there is no other means to determine the fair value of that undelivered item. ASU 2009-13 is effective for us prospectively for revenue arrangements entered into or materially modified beginning January 1, 2011. We do not believe that the adoption of this amendment will have a material impact on our consolidated financial statements.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

At December 31, 2010, our investment portfolio included fixed-income securities of \$20.7 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. 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.

**Table of Contents**

**Item 8. Consolidated Financial Statements and Supplementary Data**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

|  | <b>Page</b> |
|--|-------------|
| <u>Report of Independent Registered Public Accounting Firm</u>                                   | 50          |
| <u>Consolidated Balance Sheets</u>   | 51          |
| <u>Consolidated Statements of Operations</u>   | 52          |
| <u>Consolidated Statements of Stockholders' Equity (Deficit) and Comprehensive Income (Loss)</u> | 53          |
| <u>Consolidated Statements of Cash Flows</u>   | 54          |
| <u>Notes to Consolidated Financial Statements</u>  | 55          |

**Table of Contents**

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders

Ligand Pharmaceuticals Incorporated

We have audited the accompanying consolidated balance sheets of Ligand Pharmaceuticals Incorporated (the Company) as of December 31, 2010 and 2009, and the related statements of operations, stockholders' equity (deficit) and comprehensive loss, and cash flows for each of the three years in the period ended December 31, 2010. Our audits of the basic consolidated financial statements included the financial statement schedule listed in the index appearing under Item 15(4)(d). These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Ligand Pharmaceuticals Incorporated as of December 31, 2010 and 2009, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2010 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Ligand Pharmaceuticals Incorporated's internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated March 3, 2011 expressed an unqualified opinion.

/s/ Grant Thornton LLP

San Diego, California

March 3, 2011

**Table of Contents****LIGAND PHARMACEUTICALS INCORPORATED****CONSOLIDATED BALANCE SHEETS**

(in thousands, except share data)

|   | December 31, |            |
|---|--------------|------------|
|   | 2010         | 2009       |
| <b>ASSETS</b>   |              |            |
| Current assets:   |              |            |
| Cash and cash equivalents   | \$ 3,346     | \$ 16,032  |
| Short-term investments  | 19,351       | 37,200     |
| Accounts receivable, net  | 993          | 618        |
| Income tax receivable   | 4,575        |            |
| Assets held for sale  |              | 3,170      |
| Other current assets  | 720          | 1,364      |
| Current portion of co-promote termination payments receivable   | 8,034        | 9,782      |
| Total current assets  | 37,019       | 68,166     |
| Restricted cash and investments   | 1,341        | 1,462      |
| Property and equipment, net   | 559          | 8,522      |
| Goodwill and other identifiable intangible assets   | 12,951       | 2,515      |
| Long-term portion of co-promote termination payments receivable   | 22,851       | 30,993     |
| Deferred income taxes   |              | 25,068     |
| Other assets  | 838          | 5,081      |
| Total assets  | \$ 75,559    | \$ 141,807 |
| <b>LIABILITIES AND STOCKHOLDERS EQUITY (DEFICIT)</b>  |              |            |
| Current liabilities:  |              |            |
| Accounts payable  | \$ 8,597     | \$ 16,945  |
| Accrued liabilities   | 8,859        | 9,497      |
| Payable to Neurogen stockholders  |              | 3,770      |
| Accrued litigation settlement costs   | 1,000        | 1,000      |
| Current portion of deferred gain  | 1,702        | 1,702      |
| Current portion of co-promote termination liability   | 8,034        | 9,782      |
| Current portion of lease termination payments   | 5,296        | 4,487      |
| Current portion of deferred revenue   |              | 4,989      |
| Total current liabilities   | 33,488       | 52,172     |
| Long-term portion of co-promote termination liability   | 22,851       | 30,993     |
| Long-term portion of deferred revenue, net  | 2,546        | 3,495      |
| Long-term portion of deferred gain  |              | 1,702      |
| Long-term portion of lease termination payments   |              | 5,281      |
| Long-term portion of lease exit obligations   | 11,118       | 4,715      |
| Deferred income taxes   | 372          | 28,108     |
| Other long-term liabilities   | 1,689        | 3,253      |
| Total liabilities   | 72,064       | 129,719    |
| Commitments and contingencies   |              |            |
| Common stock subject to conditional redemption; 112,371 shares issued and outstanding at December 31, 2010 and 2009, respectively | 8,344        | 8,344      |

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|   |           |            |
|---|-----------|------------|
| Stockholders' equity (deficit):   |           |            |
| Convertible preferred stock, \$0.001 par value; 833,333 shares authorized; none issued                    |           |            |
| Common stock, \$0.001 par value; 33,333,333 shares authorized; 20,620,917 and 20,544,835 shares issued at |           |            |
| December 31, 2010 and 2009, respectively  | 21        | 123        |
| Additional paid-in capital  | 729,271   | 726,816    |
| Accumulated other comprehensive income  | 31        | 513        |
| Accumulated deficit   | (691,947) | (681,574)  |
| Treasury stock, at cost; 1,111,999 and 1,101,317 shares at December 31, 2010 and 2009, respectively       | (42,225)  | (42,134)   |
| Total stockholders' equity (deficit)  | (4,849)   | 3,744      |
|   | \$ 75,559 | \$ 141,807 |

See accompanying notes to these consolidated financial statements.

**Table of Contents**

**LIGAND PHARMACEUTICALS INCORPORATED**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

(in thousands, except share data)

|  | 2010               | Year Ended December 31,<br>2009 | 2008               |
|--|--------------------|---------------------------------|--------------------|
| <b>Revenues:</b>   |                    |                                 |                    |
| Royalties  | \$ 7,279           | \$ 8,334                        | \$ 20,315          |
| Collaborative research and development and other revenues        | 16,259             | 30,606                          | 7,000              |
| <b>Total revenues</b>  | <b>23,538</b>      | <b>38,940</b>                   | <b>27,315</b>      |
| <b>Operating costs and expenses:</b>                             |                    |                                 |                    |
| Research and development   | 22,067             | 39,870                          | 30,770             |
| General and administrative                                       | 12,829             | 15,211                          | 23,785             |
| Lease exit and termination costs                                 | 16,894             | 15,235                          |                    |
| Write-off of acquired in-process research and development        | 2,754              | 442                             | 72,000             |
| <b>Total operating costs and expenses</b>                        | <b>54,544</b>      | <b>70,758</b>                   | <b>126,555</b>     |
| Accretion of deferred gain on sale leaseback                     | 1,702              | 21,851                          | 1,964              |
| <b>Loss from operations</b>                                      | <b>(29,304)</b>    | <b>(9,967)</b>                  | <b>(97,276)</b>    |
| <b>Other income (expense):</b>                                   |                    |                                 |                    |
| Interest income  | 440                | 586                             | 2,161              |
| Interest expense   | (58)               | (270)                           | (202)              |
| Decrease in liability for contingent value rights                | 9,142              |                                 |                    |
| Other, net   | 4,377              | (221)                           | (2,198)            |
| <b>Total other income (expense), net</b>                         | <b>13,901</b>      | <b>95</b>                       | <b>(239)</b>       |
| <b>Loss from continuing operations before income tax benefit</b> | <b>(15,403)</b>    | <b>(9,872)</b>                  | <b>(97,515)</b>    |
| Income tax benefit (expense) from continuing operations          | 2,617              | 1,535                           | 55                 |
| <b>Loss from continuing operations</b>                           | <b>(12,786)</b>    | <b>(8,337)</b>                  | <b>(97,460)</b>    |
| <b>Discontinued operations:</b>                                  |                    |                                 |                    |
| Gain on sale of AVINZA Product Line before income taxes          | 2,212              | 5,434                           | 9,584              |
| Gain (loss) on sale of Oncology Product Line before income taxes | 201                | 955                             | (10,630)           |
| Income tax benefit (expense) on discontinued operations          |                    |                                 | 392                |
| <b>Income (loss) from discontinued operations</b>                | <b>2,413</b>       | <b>6,389</b>                    | <b>(654)</b>       |
| <b>Net income (loss)</b>   | <b>\$ (10,373)</b> | <b>\$ (1,948)</b>               | <b>\$ (98,114)</b> |
| <b>Basic and diluted per share amounts:</b>                      |                    |                                 |                    |
| Loss from continuing operations                                  | \$ (0.65)          | \$ (0.44)                       | \$ (6.12)          |
| Income (loss) from discontinued operations                       | 0.12               | 0.34                            | (0.04)             |

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|  |            |            |            |
|--|------------|------------|------------|
| Net income (loss)                        | \$ (0.53)  | \$ (0.10)  | \$ (6.16)  |
| Weighted average number of common shares | 19,613,201 | 18,862,751 | 15,917,570 |

See accompanying notes to these consolidated financial statements.



**Table of Contents****LIGAND PHARMACEUTICALS INCORPORATED****CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS)**

(in thousands, except share data)

|  | Common stock |        | Additional<br>paid-in<br>capital | Accumulated<br>other<br>comprehensive | Accumulated<br>deficit | Treasury stock |             | Total<br>stockholders<br>equity (deficit) | Comprehensive<br>income<br>(loss) |
|--|--------------|--------|----------------------------------|---------------------------------------|------------------------|----------------|-------------|---|-----------------------------------|
|  | Shares       | Amount |                                  | income<br>(loss)                      |                        | Shares         | Amount      |   |                                   |
| Balance at December 31,<br>2007  | 16,757,228   | \$ 17  | \$ 651,141                       | \$ 9                                  | \$ (581,512)           | (1,043,858)    | \$ (40,521) | \$ 29,115                                 |                                   |
| Issuance of common stock<br>under employee stock<br>compensation plans | 3,723        |        | 130                              |                                       |                        |                |             | 130                                       |                                   |
| Repurchase of common<br>stock  |              |        |                                  |                                       |                        | (57,459)       | (1,613)     | (1,613)                                   |                                   |
| Unrealized net gain on<br>available-for-sale securities                |              |        |                                  | 72                                    |                        |                |             | 72  | \$ 72                             |
| Stock-based compensation   |              |        | 3,607                            |                                       |                        |                |             | 3,607                                     |                                   |
| Issuance of common stock<br>for acquisition of<br>Pharmacopeia.        | 2,999,506    | 3      | 56,420                           |                                       |                        |                |             | 56,438                                    |                                   |
| Net loss   |              |        |                                  |                                       | (98,114)               |                |             | (98,114)                                  | (98,114)                          |
| Balance at December 31,<br>2008  | 19,760,457   | 20     | 711,298                          | 81                                    | (679,626)              | (1,101,317)    | (42,134)    | (10,365)                                  | \$ (98,042)                       |
| Issuance of common stock<br>under employee stock<br>compensation plans | 84,376       |        | 228                              |                                       |                        |                |             | 228                                       |                                   |
| Unrealized net gain on<br>available-for-sale securities                |              |        |                                  | 432                                   |                        |                |             | 432                                       | \$ 432                            |
| Stock-based compensation   |              |        | 3,365                            |                                       |                        |                |             | 3,365                                     |                                   |
| Shares redeemed in lieu of<br>cash payment for milestone<br>achieved.  |              |        | 3,086                            |                                       |                        |                |             | 3,086                                     |                                   |
| Issuance of common stock<br>for acquisition of<br>Neurogen.            | 700,000      | 1      | 8,942                            |                                       |                        |                |             | 8,946                                     |                                   |
| Net loss   |              |        |                                  |                                       | (1,948)                |                |             | (1,948)                                   | (1,948)                           |
| Balance at December 31,<br>2009  | 20,544,833   | 21     | 726,919                          | 513                                   | (681,574)              | (1,101,317)    | (42,134)    | 3,744                                     | (1,516)                           |
| Issuance of common stock<br>under employee stock<br>compensation plans | 76,084       |        | 27                               |                                       |                        |                |             | 27  |                                   |
| Unrealized net gain (loss)<br>on available-for-sale<br>securities      |              |        |                                  | (482)                                 |                        |                |             | (482)                                     | \$ (482)                          |
| Repurchase of common<br>stock  |              |        |                                  |                                       |                        | (10,682)       | (91)        | (91)                                      |                                   |

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|                              |            |       |            |       |              |             |             |            |             |  |
|------------------------------|------------|-------|------------|-------|--------------|-------------|-------------|------------|-------------|--|
| Stock-based compensation     | 2,325      |       |            |       |              |             |             |            |             |  |
| Net loss                     | (10,373)   |       |            |       |              |             |             |            |             |  |
| Balance at December 31, 2010 | 20,620,917 | \$ 21 | \$ 729,271 | \$ 31 | \$ (691,947) | (1,111,999) | \$ (42,225) | \$ (4,849) | \$ (10,855) |  |

See accompanying notes to these consolidated financial statements

**Table of Contents**

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

|   | <b>Year Ended December 31,</b> |             |             |
|---|--------------------------------|-------------|-------------|
|   | <b>2010</b>                    | <b>2009</b> | <b>2008</b> |
| <b>Operating activities</b>   |                                |             |             |
| Net loss  | \$ (10,373)                    | \$ (1,948)  | \$ (98,114) |
| Less: gain (loss) from discontinued operations  | 2,413                          | 6,389       | (654)       |
| Loss from continuing operations   | (12,786)                       | (8,337)     | (97,460)    |
| Adjustments to reconcile net loss to net cash used in operating activities, including effects of business acquired: |                                |             |             |
| Write-off of acquired in-process research and development   | 2,754                          | 442         | 72,000      |
| Change in estimated fair value of contingent value rights   | (9,142)                        |             |             |
| Accretion of deferred gain on sale leaseback  | (1,702)                        | (21,851)    | (1,964)     |
| Impairment and amortization of acquired intangible assets   |                                | 1,500       |             |
| Depreciation and amortization of property and equipment   | 2,212                          | 3,134       | 1,052       |
| Non-cash lease exit and termination costs   | 9,042                          | 10,102      | 5,255       |
| Non-cash development milestone revenue  |                                | (915)       |             |
| Loss on asset write-offs  | 5,303                          | 500         | 746         |
| Realized loss (gain) on investment  | (607)                          | (232)       | 2,038       |
| Stock-based compensation  | 2,325                          | 3,365       | 3,607       |
| Other   | 32                             | (18)        | (16)        |
| Changes in operating assets and liabilities, net of acquisition:  |                                |             |             |
| Accounts receivable, net  | (375)                          | (618)       |             |
| Other current assets  | (3,931)                        | (448)       | 4,942       |
| Restricted indemnity account and other  | (332)                          | 10,346      | (162)       |
| Accounts payable and accrued liabilities  | (13,447)                       | (10,989)    | (7,338)     |
| Other liabilities   | (715)                          | (2,318)     | 1,252       |
| Deferred revenue  | (5,938)                        | (14,302)    |             |
| Net cash used in operating activities of continuing operations  | (27,307)                       | (30,639)    | (16,048)    |
| Net cash provided by (used in) operating activities of discontinued operations                                      | 240                            | (3,162)     | (4,577)     |
| Net cash used in operating activities   | (27,067)                       | (33,801)    | (20,625)    |
| <b>Investing activities</b>   |                                |             |             |
| Cash paid for acquisition of Metabasis  | (2,834)                        |             |             |
| Cash acquired from acquisition of Pharmacoepia  |                                |             | 4,135       |
| Cash acquired from acquisition of Neurogen  |                                | 9,796       |             |
| Acquisition of development stage asset  | (1,247)                        |             |             |
| Purchases of property and equipment   | (70)                           | (522)       | (495)       |
| Proceeds from sale of property and equipment and building   | 589                            | 108         | 92          |
| Purchases of short-term investments   | (35,584)                       | (32,806)    | (68,370)    |
| Proceeds from sale of short-term investments  | 54,040                         | 47,761      | 32,015      |
| Other, net  | (354)                          | 431         | 141         |
| Net cash provide by (used in) investing activities of continuing operations   | 14,540                         | 24,768      | (32,482)    |
| Net cash provided by investing activities of discontinued operations  |                                |             | 8,058       |
| Net cash provided by (used in) investing activities   | 14,540                         | 24,768      | (24,424)    |
| <b>Financing activities</b>   |                                |             |             |
| Principal payments on equipment financing obligations   | (91)                           | (473)       | (1,527)     |
| Repayment of debt   |                                | (3,443)     |             |
| Net proceeds from issuance of common stock  | 23                             | 228         | 130         |
| Repurchase of common stock  | (91)                           |             | (1,613)     |

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|  |          |           |           |
|--|----------|-----------|-----------|
| Net cash used in financing activities of continuing operations                 | (159)    | (3,688)   | (3,010)   |
| Net cash provided by (used in) financing activities of discontinued operations |          |           |           |
| Net cash used in financing activities  | (159)    | (3,688)   | (3,010)   |
| Net increase (decrease) in cash and cash equivalents                           | (12,686) | (12,721)  | (48,059)  |
| Cash and cash equivalents at beginning of year                                 | 16,032   | 28,753    | 76,812    |
| Cash and cash equivalents at end of year                                       | \$ 3,346 | \$ 16,032 | \$ 28,753 |
| <b>Supplemental disclosure of cash flow information</b>                        |          |           |           |
| Interest paid  | \$ 58    | \$ 270    | \$ 229    |
| Taxes paid   | 28       | 14        | 140       |
| Proceeds received from sale of building and disbursed to Neurogen shareholders | 3,170    |           |           |
| <b>Supplemental schedule of non-cash investing and financing activities</b>    |          |           |           |
| Issuance of common stock for acquisition                                       |          | 8,946     | 56,438    |

See accompanying notes to these consolidated financial statements.

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**Table of Contents**

**LIGAND PHARMACEUTICALS INCORPORATED AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. The Company and Its Business**

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 consolidated financial statements include the Company's wholly owned subsidiaries, Seragen, Inc. (Seragen), Nexus Equity VI LLC (Nexus), Pharmacoepia, LLC, Neurogen Corporation and Metabasis Therapeutics, Inc. The Company's principle market is the United States. As further discussed in Note 6, 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's other potential products are in various stages of development. Potential products that are promising at early stages of development may not reach the market for a number of reasons. Prior to generating revenues from these products, the Company or its collaborative partners must complete the development of the products in the human health care market. No assurance can be given that: (1) product development efforts will be successful, (2) required regulatory approvals for any indication will be obtained, (3) any products, if introduced, will be capable of being produced in commercial quantities at reasonable costs or, (4) patient and physician acceptance of these products will be achieved. The Company faces risks common to companies whose products are in various stages of development. These risks include, among others, the Company's need for additional financing to complete its research and development programs and commercialize its technologies.

The Company has incurred significant losses since its inception. At December 31, 2010, the Company's accumulated deficit was \$691.9 million. Based on management's plans, including expense reductions, if necessary, and the Company's current business outlook and working capital of \$3.5 million, 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, including revenues from Cydex, 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 AVINZA, VIVIAN, CONBRIZA and PROMACTA; the efforts of its collaborative partners; obligations under its operating lease agreements and lease termination agreement; and the capital requirements of any companies the Company acquires, including Neurogen, Metabasis and 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.

**2. Significant Accounting Policies**

*Principles of Consolidation*

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

*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,

**Table of Contents**

including disclosure of contingent assets and contingent liabilities, at the date of the consolidated financial statements and the reported amounts of revenues and expenses, in-process research and development, goodwill, deferred revenue and income tax net operating losses during the reporting period. The Company's critical accounting policies are those that are both most important to the Company's consolidated 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.

*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 security investments with a maturity of more than three months are considered short-term investments and have been classified by management as available-for-sale. Such investments are carried at fair value, with unrealized gains and losses included as a separate component of stockholders' equity. The Company determines the cost of investments based on the specific identification method.

*Restricted Cash and Investments*

Restricted cash and investments consist of certificates of deposit held with a financial institution as collateral under equipment financing and third-party service provider arrangements. The certificates of deposit have been classified by management as held-to-maturity and are accounted for at amortized cost.

*Concentrations of Credit Risk*

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

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 in Note 7, the Company has not experienced any significant losses on its cash equivalents, short-term investments or restricted investments.

As of December 31, 2010, cash deposits held at financial institutions in excess of FDIC insured amounts of \$250,000 were approximately \$5.1 million.

*Property and Equipment*

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

|  | <b>December 31,</b> |             |
|--|---------------------|-------------|
|  | <b>2010</b>         | <b>2009</b> |
| Lab and office equipment                       | \$ 5,676            | \$ 10,145   |
| Leasehold improvements                         | 55                  | 5,402       |
| Computer equipment and software                | 3,996               | 5,293       |
|  | 9,727               | 20,840      |
| Less accumulated depreciation and amortization | (9,168)             | (12,318)    |
|  | \$ 559              | \$ 8,522    |

**Table of Contents**

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.

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. In addition, the Company wrote-off property and equipment with a net book value of \$5.4 million related to the facility closure.

*Assets Held for Sale*

As discussed in Note 4, the Company acquired Neurogen Corporation ( Neurogen ) on December 23, 2009. Neurogen had entered into an agreement with a commercial real estate developer to sell its properties for a gross selling price of \$3.5 million. These properties were held for sale on the accompanying consolidated balance sheet at carrying value of \$3.2 million net of estimated costs to sell. The sale was completed on February 2, 2010. Net proceeds from the sale were distributed to Neurogen's stockholders through a Contingent Value Right ( CVR ) agreement.

*Goodwill and Other Identifiable Intangible Assets*

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

|  | <b>December 31,</b> |                 |
|--|---------------------|-----------------|
|  | <b>2010</b>         | <b>2009</b>     |
| Acquired in-process research and development | \$ 12,251           | \$ 1,815        |
| Goodwill                                     | 700                 | 700             |
|  | <b>\$ 12,951</b>    | <b>\$ 2,515</b> |

In November 2010, Roche notified the Company that it was exercising its right to terminate the collaboration and license agreement with the Company's subsidiary, Metabasis Therapeutics, Inc. As a result, the Company's management reviewed the carrying amount of the intangible asset related to this agreement. Based on an analysis of available information, management determined that the asset would not generate future cash flows. Therefore, the Company wrote-off the \$2.8 million of acquired in-process research and development associated with the agreement during the year ended December 31, 2010.

In May 2010, the Company purchased from the Genaera Liquidating Trust certain intellectual property and interests in future milestones and royalties for MEDI-528, an IL-9 antibody program under development by AstraZeneca's subsidiary, MedImmune. MEDI-528 is currently in a 320-patient Phase II study for moderate-to-severe asthma. The Company paid \$2.8 million to the Genaera Liquidating Trust in connection with the purchase. As part of the transaction, the Company also entered into a separate agreement with a shareholder of Ligand, whereby the shareholder and Ligand agreed to share the purchase price and any proceeds from the deal equally. Accordingly, the Company was reimbursed for \$1.4 million of the purchase price. The Company recorded the net purchase price of \$1.4 million as acquired In-Process Research and Development ( IPR&D ).

In January 2010, the Company completed its acquisition of Metabasis Therapeutics, Inc. ( Metabasis ) following approval of the transaction by Metabasis stockholders. The Company paid \$1.8 million in cash, or approximately \$0.046 per Metabasis share, to Metabasis' stockholders. In addition, Metabasis stockholders received 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 holders to cash payments as frequently as every six months as cash is received by the Company from proceeds from Metabasis' partnership with Roche or the sale or partnering of any of the Metabasis drug development programs, among other triggering events. The Company

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**Table of Contents**

has also committed to spend at least \$8.0 million in new research and development funding on the Metabasis programs within 42 months following the closing of the transaction. The Company has allocated \$12.0 million of the purchase price of Metabasis to IPR&D.

In July 2009, the Company and N.V. Organon, which was acquired by Schering-Plough in November 2007, mutually agreed to terminate the research collaboration under their collaboration and license agreement. Schering-Plough continued to fund research collaboration activities on those targets currently under investigation through December 2009. As a result of the termination, the Company recorded an impairment charge of \$1.1 million and adjusted its remaining useful life of the related intangible asset to four months. During the year ended December 31, 2009, the Company recorded \$0.9 million of amortization expense.

Additionally, during the quarter ended March 31, 2009, the Company adjusted its preliminary purchase price allocation for Pharmacoepia, Inc., which resulted in an increase in transaction costs of \$0.3 million and decreases in property and equipment of \$1.1 million, liabilities assumed of \$4.4 million and goodwill of \$3.0 million. During the quarter ended June 30, 2009, the Company further adjusted its purchase price allocation for Pharmacoepia, Inc., which resulted in an increase in the write-off of acquired in-process research and development of \$0.4 million and decreases in property and equipment of \$0.1 million, acquired intangible assets of \$17,000 and goodwill of \$0.3 million.

*Acquired in-process research and development*

Intangible assets related to in-process research and development costs, or 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.

For acquisitions prior to January 1, 2009, the estimated fair value of IPR&D projects, which had not reached technological feasibility at the date of acquisition and which did not have an alternative future use, were immediately expensed. In 2008, the Company wrote off \$72.0 million of acquired IPR&D related to the acquisition of Pharmacoepia, Inc. As a result of subsequent adjustments to the purchase price allocation related to the acquisition of Pharmacoepia, Inc., the Company wrote-off an additional \$0.4 million of acquired in-process research and development in 2009.

*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 December 31, 2010, management believes that the future undiscounted cash flows to be received from its long-lived assets will exceed the assets carrying value.

*Liability for Contingent Value Rights*

In connection with the Company's acquisition of Metabasis in January 2010, the Company issued Metabasis stockholders four tradable contingent value rights, one contingent value right from each of four respective series



**Table of Contents**

of contingent value rights, for each Metabasis share. The contingent value rights will entitle Metabasis stockholders to cash payments as frequently as every six months as cash is received by the Company from proceeds from Metabasis partnership with Roche or the sale or partnering of any of the Metabasis drug development programs, among other triggering events. The acquisition-date fair value of the contingent value rights of \$9.1 million was determined using quoted market prices of Metabasis common stock in active markets. The fair values of the contingent value rights are remeasured at each reporting date through the term of the related agreement. Changes in the fair values are reported in the statement of operations as income (decreases) or expense (increases). The carrying amount of the liability may fluctuate significantly based upon quoted market prices and actual amounts paid under the agreements may be materially different than the carrying amount of the liability. The fair value of the liability at December 31, 2010 was \$0. As a result, the Company recorded a decrease in liability for contingent value rights of \$9.1 million during the year ended December 31, 2010.

In connection with the Company's acquisition of Neurogen in December 2009, the Company issued to Neurogen stockholders four contingent value rights; real estate, Aplindore, VR1 and H3, that entitle them to cash and/or shares of third-party stock under certain circumstances. The Company recorded the acquisition-date fair value of the contingent value rights as part of the purchase price. The acquisition-date fair value of the real estate contingent value right of \$3.2 million was estimated using the net proceeds from a pending sale transaction and recorded as a payable to stockholders at December 31, 2009. In February 2010, the Company completed the sale of the real estate and subsequently distributed the proceeds to the holders of the real estate contingent value rights. As a result and after final settlement of all related expenses, the real estate contingent value right was terminated in August 2010. The acquisition-date fair value of the Aplindore, VR1 and H3 contingent value rights of \$0, \$0.2 million and \$0.5 million, respectively, were estimated using the income method, which uses a discounted cash flow model and applies a probability weighting based on estimates of successful product development and commercialization to estimated future net cash flows resulting from projected revenues and related costs. The fair values of the contingent value rights are remeasured at each reporting date through the term of the related agreement. Changes in the fair values are reported in the statement of operations as income (decreases) or expense (increases). At December 31, 2010 and 2009, the aggregate fair values of the Aplindore, VR1 and H3 CVR's were \$0.7 million and \$0.7 million, respectively, and included in other long-term liabilities in the accompanying consolidated balance sheets as management is unable to estimate the timing of potential future payments.

In connection with the Company's acquisition of Pharmacoepia in December 2008, the Company issued to Pharmacoepia security holders a contingent value right that entitles each holder to receive a proportionate share of an aggregate of \$15.0 million if the Company entered into a license, sale, development, marketing or option agreement with respect to any product candidate from Pharmacoepia's DARA program. The contingent value rights expire on December 31, 2011. The Company did not record a liability for contingent value rights at the time of the acquisition as the Company's management deemed, based on available information, that the likelihood of payment was not determinable beyond a reasonable doubt. The Company will record a liability if and when a payment becomes due as a result of entering into a transaction covered under the terms of the contingent value right agreement as described above. At December 31, 2010 and 2009, the Company's management deemed, based on available information, that the likelihood of payment was not determinable beyond a reasonable doubt and, therefore, no liability has been recorded.

*Fair Value of Financial Instruments*

Fair value is defined as the exit price that would be received to sell an asset or paid to transfer a liability. Fair value is a market-based measurement that should be determined using assumptions that market participants would use in pricing an asset or liability. The Company establishes a three-level hierarchy to prioritize the inputs used in measuring fair value. The levels are described in the table below with Level 1 having the highest priority and Level 3 having the lowest.

**Table of Contents**

The following table provides a summary of the assets and liabilities that are measured at fair value on a recurring basis as of December 31, 2010 (in thousands):

|  | Total     | Fair Value Measurements at Reporting Date Using                |   | Significant Unobservable Inputs (Level 3) |
|--|-----------|--|---|---|
|  |           | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) |   |
| <b>Assets:</b>                             |           |  |   |   |
| Fixed income available-for-sale securities | \$ 19,351 | \$ 19,351  | \$  | \$  |
| <b>Liabilities:</b>                        |           |  |   |   |
| Warrant liability                          | \$        | \$   | \$  | \$  |
| Liability for contingent value rights      | 700       |  |   | 700                                       |
| Total liabilities                          | \$ 700    | \$   | \$  | \$ 700                                    |

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, 2009 (in thousands):

|  | Total     | Fair Value Measurements at Reporting Date Using                |   | Significant Unobservable Inputs (Level 3) |
|--|-----------|--|---|---|
|  |           | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) |   |
| <b>Assets:</b>                             |           |  |   |   |
| Fixed income available-for-sale securities | \$ 37,200 | \$ 35,305  | \$ 1,895                                      | \$  |
| <b>Liabilities:</b>                        |           |  |   |   |
| Warrant liability                          | \$ 459    | \$   | \$  | \$ 459                                    |
| Liability for contingent value rights      | 700       |  |   | 700                                       |
| Total liabilities                          | \$ 1,159  | \$   | \$  | \$ 1,159                                  |

The Company's short-term investments are fixed income available-for-sale securities and include U.S. Government Notes and Corporate Discount Commercial Paper. The fair value of the Company's short-term investments is determined using quoted market prices in active markets. The fair value of the warrant liability is determined using the Black-Scholes option-pricing model, which uses certain significant unobservable inputs, including stock price (quoted market prices in active market), warrant exercise price (defined in warrant agreement), expected life of warrant (defined in warrant agreement), dividend yields (determined by the Company), and risk-free interest rate (quoted market prices based on expected life assumption).

*Revenue Recognition*

Royalties on sales of AVINZA and PROMACTA are recognized in the quarter reported by the respective partner.

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. Amounts received under multiple-element arrangements requiring ongoing services or performance by the Company are recognized over the period of such services or performance.



**Table of Contents**

Revenue from milestones is 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) collectibility 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.

The composition of collaborative research and development and other revenues is as follows (in thousands):

|  | Year Ended December 31, |           |          |
|--|-------------------------|-----------|----------|
|  | 2010                    | 2009      | 2008     |
| Collaborative research and development | \$ 7,734                | \$ 23,316 | \$       |
| License fees                           | 6,250                   | 525       | 5,000    |
| Development milestones and other       | 2,275                   | 6,676     | 2,000    |
|  | \$ 16,259               | \$ 30,606 | \$ 7,000 |

*Preclinical Study and Clinical Trial Accruals*

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

*Warrant Liability*

To qualify as permanent equity, an equity derivative, including warrants, must permit the Company to settle in unregistered shares. Under securities law, if the warrants were issued in connection with a public offering and have a cash settlement feature at the holder's option, the Company does not have the ability to settle in unregistered shares. Therefore, the warrants cannot be classified as permanent equity and are instead classified as a liability. The warrants that the Company issued as part of its equity financing in October 2006 meet this criterion, and their fair value has been recorded as a liability in the accompanying consolidated balance sheets. Other warrants the Company had previously issued qualify as permanent equity and do not require remeasurement.

The Company records its warrant liabilities at fair value using a Black-Scholes option-pricing model and remeasures at each reporting date until the warrants are exercised or have expired. Changes in the fair value of the warrants are reported in the statements of operations as income or expense. The fair value of the warrants is subject to significant fluctuation based on changes in the Company's stock price, expected volatility, expected life, the risk-free interest rate and dividend yield. The market price for the Company's common stock has been and may continue to be volatile. Consequently, future fluctuations in the price of the Company's common stock may cause significant increases or decreases in the fair value of the warrants.

## **Table of Contents**

### *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 December 31, 2010 and December 31, 2009, the Company had deferred \$2.5 million of revenue, which is included in long-term portion of deferred revenue.

### *Assets and Liabilities Related to Discontinued Operations*

#### *Medicaid Rebates*

The Company's products related to the commercial operations that were sold were subject to state government-managed Medicaid programs whereby discounts and rebates are provided to participating state governments. The Company is still obligated to pay for these rebates for products in the distribution channel that were not sold-through at the time of the sale of the Company's commercial operations. Medicaid rebates are accounted for by establishing an accrual in an amount equal to the Company's estimate of Medicaid rebate claims attributable to sales recognized in that period. The estimate of the Medicaid rebates accrual is determined primarily based on historical experience regarding Medicaid rebates, as well as current and historical prescription activity provided by external sources, current contract prices and any expected contract changes. Management additionally considers any legal interpretations of the applicable laws related to Medicaid and qualifying federal and state government programs and any new information regarding changes in the Medicaid programs' regulations and guidelines that would impact the amount of the rebates. Management adjusts the accrual periodically throughout each period to reflect actual experience, expected changes in future prescription volumes and any changes in business circumstances or trends.

#### *Government Chargebacks*

The Company's products related to the commercial operations that were sold were subject to certain programs with federal government entities and other parties whereby pricing on products is extended below wholesaler list price to participating entities. The Company is still obligated to pay for these chargebacks for products in the distribution channel that were not sold-through at the time of the sale of the Company's commercial operations. These entities purchase products through wholesalers at the lower vendor price, and the wholesalers charge the difference between their acquisition cost and the lower vendor price back to the Company. Chargebacks are accounted for by establishing an accrual in an amount equal to the estimate of chargeback claims. Management determines estimates of the chargebacks primarily based on historical experience regarding chargebacks and current contract prices under the vendor programs. Management considers vendor payments and claim processing time lags and adjusts the accrual periodically throughout each period to reflect actual experience and any changes in business circumstances or trends.

#### *Managed Health Care Rebates and Other Contract Discounts*

The Company previously offered rebates and discounts on certain products related to the commercial operations that were sold to managed health care organizations and to other contract counterparties such as hospitals and group purchasing organizations in the U.S. The Company is still obligated to pay for these rebates and discounts for products in the distribution channel that were not sold-through at the time of the sale of the Company's commercial operations. Managed health care rebates and other contract discounts are accounted for by establishing an accrual in an amount equal to the estimate of managed health care rebates and other contract discounts. Estimates of the managed health care rebates and other contract discounts accruals are determined

## **Table of Contents**

primarily based on historical experience regarding these rebates and discounts and current contract prices. Management also considers the current and historical prescription activity provided by external sources, current contract prices and any expected contract changes and adjusts the accrual periodically throughout each period to reflect actual experience and any changes in business circumstances or trends.

### *Product Returns*

In connection with the sale of the Company's product lines, the Company retained the obligation for returns of product that were shipped to wholesalers prior to the close of the transactions. The accruals for product returns, which were recorded as part of the accounting for the sales transactions, are based on historical experience. Any subsequent changes to the Company's estimate of product returns are accounted for as a component of discontinued operations.

### *Costs and Expenses*

Collaborative research and development expense consists of the labor, material, equipment and allocated facilities cost of the Company's scientific staff who are working pursuant to the Company's collaborative agreements. From time to time, collaborative research and development expense includes costs related to research efforts in excess of those required under certain collaborative agreements. Management has the discretion to set the scope of such excess efforts and may increase or decrease the level of such efforts depending on the Company's strategic priorities.

Proprietary research and development expense consists of intellectual property in-licensing costs, labor, materials, contracted services, and allocated facility costs that are incurred in connection with internally funded drug discovery and development programs.

Research and development costs are expensed as incurred. Research and development expenses from continuing operations were \$22.1 million, \$39.9 million and \$30.8 million in 2010, 2009 and 2008, respectively, of which 61%, 47% and 100%, respectively, were sponsored by Ligand, and the remainder of which was funded pursuant to collaborative research and development arrangements.

### *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 (deficit).

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.

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## **Table of Contents**

### *Income (Loss) Per Share*

Net income (loss) per share is computed using the weighted average number of common shares outstanding. Basic and diluted income (loss) per share amounts are equivalent for the periods presented as the inclusion of potential common shares in the number of shares used for the diluted computation would be anti-dilutive to loss per share from continuing operations. No potential common shares are included in the computation of any diluted per share amounts, including income (loss) per share from discontinued operations, as the Company reported a net loss from continuing operations for all periods presented. Potential common shares, the shares that would be issued upon the exercise of outstanding warrants and stock options, and the vesting of restricted shares, were 0.7 million, 1.1 million and 0.8 million at December 31, 2010, 2009, and 2008, respectively.

### *Accounting for Stock-Based Compensation*

The Company has employee compensation plans under which various types of stock-based instruments are granted. Share-based payments to employees, including grants of employee stock options, are recognized in the Consolidated Statements of Operations as compensation expense (based on their estimated fair values) generally over the vesting period of the awards using the straight-line method. Compensation expense for consultant awards is recognized over each separate tranche's vesting period.

### *Comprehensive Income (Loss)*

Comprehensive income (loss) represents net income (loss) adjusted for the change during the periods presented in unrealized gains and losses on available-for-sale securities less reclassification adjustments for realized gains or losses included in net income (loss). The accumulated unrealized gains or losses are reported as accumulated other comprehensive income (loss) as a separate component of stockholders' equity.

### *Segment Reporting*

The Company currently operates in a single operating segment. The Company generates revenue from various sources that result primarily from its underlying research and development activities. In addition, financial results are prepared and reviewed by management as a single operating segment. Management continually evaluates the benefits of operating in distinct segments and will report accordingly when such distinction is made.

### *New Accounting Pronouncements*

In October 2009, the FASB issued ASU No. 2009-13, Multiple-Deliverable Revenue Arrangements, or ASU 2009-13, which amends existing revenue recognition accounting pronouncements that are currently within the scope of ASC 605. This guidance eliminates the requirement to establish the fair value of undelivered products and services and instead provides for separate revenue recognition based upon management's estimate of the selling price for an undelivered item when there is no other means to determine the fair value of that undelivered item. ASU 2009-13 is effective for the Company prospectively for revenue arrangements entered into or materially modified beginning January 1, 2011. Management does not believe that the adoption of this amendment will have a material impact on its consolidated financial statements.

### **3. Acquisition of Metabasis**

On January 27, 2010, the Company completed the acquisition of Metabasis following approval of the transaction by Metabasis stockholders. As a result, the Company gained a fully funded partnership with Roche, additional pipeline assets and drug discovery technologies and resources. The transaction was first announced on October 27, 2009. The Company paid \$1.8 million in cash, or approximately \$0.046 per Metabasis share, to Metabasis stockholders. In addition, Metabasis stockholders received four tradable CVRs, one CVR from each of four respective series of CVRs, for each Metabasis share. The CVRs will entitle Metabasis stockholders to

**Table of Contents**

cash payments as frequently as every six months as cash is received by the Company from proceeds from Metabasis partnership with Roche or the sale or partnering of any of the Metabasis drug development programs, among other triggering events. The Company has also committed to spend at least \$8.0 million in new research and development funding on the Metabasis programs within 42 months following the closing of the transaction.

The components of the purchase price allocation for Metabasis are as follows:

**Purchase Consideration:****(in thousands)**

|                                       |                  |
|---------------------------------------|------------------|
| Cash paid to Metabasis shareholders   | \$ 1,758         |
| Fair value of contingent value rights | 9,142            |
| <b>Total purchase consideration</b>   | <b>\$ 10,900</b> |

**Allocation of Purchase Price:****(in thousands)**

|  |                  |
|--|------------------|
| Cash acquired                                | \$ 376           |
| Other current assets                         | 382              |
| Acquired in-process research and development | 11,975           |
| Liabilities assumed                          | (1,833)          |
|  | <b>\$ 10,900</b> |

There were no acquired identified intangible assets with definite lives from the acquisition with Metabasis. The Company expensed approximately \$0.3 million of transaction costs related to the acquisition.

The Company has allocated \$12.0 million of the purchase price of Metabasis to IPR&D. This amount represents the estimated fair value of various acquired in-process projects that have not yet reached technological feasibility and do not have future alternative use as of the date of the merger. The amount is related to internal and partnered product candidates targeting a variety of indications and currently in the preclinical stage of development. Of the total amount, \$2.8 million relates to a fully funded partnership with Roche for hepatitis C, \$3.0 million relates to an internal program for glucagon antagonists to treat type 2 diabetes, \$2.5 million relates to an internal liver-targeted thyroid receptor B agonist (TR Beta) program, and \$3.7 million relates to various early stage programs as well as an equity interest in a private biotechnology company. The estimated fair values of acquired IPR&D was based on the relative value of the grossed up trading price of each CVR that it is associated with assuming former Metabasis shareholders would retain 50% of the Glucagon, TR Beta and General CVR s and 66% of the Roche CVR. The total value of \$12.0 million was allocated based on the following percentages; Roche CVR 23%, Glucagon CVR 25%, TR Beta CVR 21% and General CVR 31%.

In addition, at the closing of the acquisition, the Company recorded a \$9.1 million contingent liability for amounts potentially due to holders of CVRs. The initial fair value of the liability was determined using quoted market prices of Metabasis common stock in active markets. The liability will continue to be 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 the Company s 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. The fair value of the liability at December 31, 2010 was \$0. As a result, the Company recorded a decrease in liability for contingent value rights of \$9.1 million during the year ended December 31, 2010.



**Table of Contents**

Had the merger with Metabasis been completed as of the beginning of 2009, the Company's pro forma results for 2010 and 2009 would have been as follows (unaudited):

| (in thousands, except per share data)     | 2010      | 2009      |
|---|-----------|-----------|
| Revenue                                   | \$ 23,538 | \$ 55,424 |
| Operating loss                            | (30,308)  | (15,821)  |
| Net loss                                  | (13,535)  | (7,966)   |
| Basic and diluted earnings per share:     |           |           |
| Continuing operations                     | \$ (0.70) | \$ (0.76) |
| Discontinued operations                   | \$ 0.01   | \$ 0.34   |
| Net income (loss)                         | \$ (0.69) | \$ (0.42) |
| Basic and diluted weighted average shares | 19,613    | 18,863    |

The primary adjustments relate to the loss of interest income due to the timing of transaction related payments. The above pro forma information was determined based on historical results adjusted for the purchase price allocation and changes in income associated with the merger of Metabasis.

**4. Acquisition of Neurogen**

On December 23, 2009, the Company completed its acquisition of Neurogen. Pursuant to the terms of the merger agreement, the Company acquired all of the issued and outstanding shares of Neurogen and in exchange the Company issued to Neurogen stockholders 0.7 million shares of the Company's common stock and \$0.6 million in cash. In connection with the merger, Neurogen's stockholders received contingent value rights that entitle them to cash and/or shares of third-party stock under certain circumstances. The results of operations of Neurogen have been included in the consolidated financial statements since December 23, 2009 and were not material.

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

|  |                  |
|--|------------------|
| <b>Purchase Consideration:</b>                             |                  |
| Fair value of common stock issued to Neurogen shareholders | \$ 8,946         |
| Cash paid to Neurogen shareholders                         | 600              |
| Fair value of contingent value rights                      | 3,870            |
| <b>Total purchase consideration</b>                        | <b>\$ 13,416</b> |
| <b>Allocation of Purchase Price:</b>                       |                  |
| Cash acquired  | \$ 9,796         |
| Other current assets                                       | 3,321            |
| In-process research and development                        | 1,815            |
| Goodwill   | 700              |
| Other assets   | 324              |
| Liabilities assumed  | (2,540)          |
|  | <b>\$ 13,416</b> |

There were no acquired identified intangible assets with definite lives from the acquisition with Neurogen.

The Company has allocated \$1.8 million of the purchase price of Neurogen to acquired IPR&D. This amount represents the estimated fair value of various acquired in-process projects that have not yet reached technological feasibility and do not have future alternative use as of the date of the merger. The amount is related to internal and partnered product candidates targeting a variety of indications and currently in the preclinical



**Table of Contents**

stage of development. Of the total amount, \$1.2 million relates to Neurogen's fully funded partnership with Merck for Vanilloid Receptor Subtype 1 (VR1) Antagonists. The remaining \$0.6 million relates to Neurogen's internally developed clinical candidates for blockade of the histamine H3 receptor.

Management used the income method to determine the estimated fair values of acquired IPR&D, which uses a discounted cash flow model and applies a probability weighting based on estimates of successful product development and commercialization to estimated future net cash flows resulting from projected revenues and related costs. These success rates take 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 45% for the VR1 program and 50% for the H3 program.

Neurogen had entered into an agreement with a commercial real estate developer to sell its properties for a gross selling price of \$3.5 million. These properties are held for sale on the accompanying consolidated balance sheet at carrying value of \$3.2 million net of estimated costs to sell. The sale was completed on February 2, 2010. Net proceeds from the sale were distributed to Neurogen's stockholders through a CVR.

Had the merger with Neurogen been completed as of the beginning of 2008, the Company's pro forma results for 2009 and 2008 would have been as follows (unaudited):

| (in thousands, except per share data)     | 2009      | 2008      |
|---|-----------|-----------|
| Revenue                                   | \$ 41,590 | \$ 30,315 |
| Operating loss                            | (32,969)  | (149,040) |
| Net loss                                  | (24,556)  | (132,482) |
| Basic and diluted earnings per share:     |           |           |
| Continuing operations                     | \$ (0.28) | \$ (1.32) |
| Discontinued operations                   | \$ 0.07   | \$ (0.01) |
| Net income (loss)                         | \$ (0.21) | \$ (1.33) |
| Basic and diluted weighted average shares | 117,372   | 99,705    |

The primary adjustments relate to the loss of interest income due to the timing of transaction related payments. 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 Neurogen.

**5. Acquisition of Pharmacoepia**

On December 23, 2008, the Company completed the acquisition of Pharmacoepia, Inc., a clinical development stage biopharmaceutical company dedicated to discovering and developing novel small molecule therapeutics to address significant medical needs, under which the Company acquired all outstanding shares of Pharmacoepia in a cash and stock transaction. The acquisition was accounted for as a business combination. In connection with the acquisition, the Company issued 2,999,506 shares of common stock to Pharmacoepia stockholders, or 0.0998 shares for each outstanding Pharmacoepia share, as well as \$9.3 million in cash. The value of the common stock issued was derived from the number of Ligand common shares issued at a price of \$18.84 per share determined by the average closing price of Ligand shares for the two days prior, the day of, and the two days subsequent to the public announcement on September 24, 2008. In addition, Pharmacoepia security holders received a contingent value right (CVR) that entitles each holder the right to receive a proportionate share of an aggregate of \$15.0 million if Ligand enters into a license, sale, development, marketing or option agreement with respect to any product candidate from Pharmacoepia's DARA program (other than any agreement with Bristol-Meyers Squibb or any of its affiliates) on or prior to December 31, 2011. The estimated fair value of the CVRs is not included in the total purchase price as the Company's management has deemed, based on currently available information, that the likelihood of payment is not probable. The results of Pharmacoepia's operations have been included in the consolidated financial statements commencing December 23, 2008.

**Table of Contents**

The components of the preliminary purchase price allocation for Pharmacoepia are as follows:

|  |               |
|--|---------------|
| <b>Purchase Consideration:</b>                                 |               |
| <b>(in thousands)</b>  |               |
| Fair value of common stock issued to Pharmacoepia shareholders | \$ 56,439     |
| Cash paid to Pharmacoepia shareholders                         | 9,337         |
| Transaction costs  | 4,344         |
| <br>Total purchase consideration                               | <br>\$ 70,120 |

|   |               |
|---|---------------|
| <b>Allocation of Purchase Price:</b>              |               |
| <b>(in thousands)</b>                             |               |
| Cash acquired                                     | \$ 17,754     |
| Other current assets                              | 1,390         |
| Property and equipment                            | 11,500        |
| Acquired intangible assets                        | 2,000         |
| In-process research and development               | 72,000        |
| Goodwill and other identifiable intangible assets | 3,375         |
| Other assets                                      | 144           |
| Liabilities assumed                               | (38,043)      |
|   | <br>\$ 70,120 |

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

|   |          |
|---|----------|
| <b>Acquired Intangible Assets</b>                           |          |
| <b>(in thousands)</b>                                       |          |
| Collaborative research and development with Schering-Plough | \$ 2,000 |

The weighted-average amortization period for the collaborative research and development with Schering Plough is 3 years.

The Company has allocated \$72.0 million of the purchase price of Pharmacoepia to acquired IPR&D. This amount represents the estimated fair value of various acquired in-process projects that have not yet reached technological feasibility and do not have future alternative use as of the date of the merger. The amount is related to internal and partnered product candidates targeting a variety of indications and currently in various stages of development ranging from preclinical to Phase II. Of the total amount, \$29.0 million relates to product candidates currently in the preclinical stage of development, \$9.0 million relates to product candidates currently in Phase I clinical trials and \$34.0 million relates to product candidates currently in Phase II clinical trials.

Management used the income method to determine the estimated fair values of acquired IPR&D, which uses a discounted cash flow model and applies a probability weighting based on estimates of successful product development and commercialization to estimated future net cash flows resulting from projected revenues and related costs. These success rates take 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 40% for product candidates in the preclinical stage, 35% for product candidates currently in Phase I clinical trials and 30% for product candidates currently in Phase II clinical trials.

As discussed in Note 14, in July 2009, the Company and N.V. Organon, which was acquired by Schering-Plough (now Merck) in November 2007, mutually agreed to terminate the research collaboration under their



**Table of Contents**

collaboration and license agreement. Merck continued to fund research collaboration activities on those targets currently under investigation through December 2009. As a result of the termination, the Company recorded an impairment charge of \$1.1 million and adjusted its remaining useful life to four months. During the year ended December 31, 2009, the Company recorded \$0.9 million of amortization expense. Additionally, during the quarter ended March 31, 2009, the Company adjusted its preliminary purchase price allocation for Pharmacoepia, Inc., which resulted in an increase in transaction costs of \$0.3 million and decreases in property and equipment of \$1.1 million, liabilities assumed of \$4.4 million and goodwill of \$3.0 million. During the quarter ended June 30, 2009, the Company further adjusted its purchase price allocation for Pharmacoepia, Inc., which resulted in an increase in the write-off of acquired in-process research and development of \$0.4 million and decreases in property and equipment of \$0.1 million, acquired intangible assets of \$17,000 and goodwill of \$0.3 million.

Had the merger with Pharmacoepia been completed as of the beginning of 2008, the Company's pro forma results for 2008 would have been as follows (unaudited):

| <b>(in thousands, except per share data)</b> | <b>2008</b> |
|--|-------------|
| Revenue                                      | \$ 51,351   |
| Operating loss                               | (151,503)   |
| Net income (loss)                            | (145,220)   |
| Basic and diluted earnings per share:        |             |
| Continuing operations                        | \$ (1.27)   |
| Discontinued operations                      | \$ (0.01)   |
| Net income (loss)                            | \$ (1.28)   |
| Basic and diluted weighted average shares    | 113,060     |

The primary adjustments relate to the purchase accounting impact of the write-off of IPR&D and the amortization of the acquired collaborative research and development collaboration with Schering-Plough. 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 Pharmacoepia.

**6. Discontinued Operations***Oncology Product Line*

On September 7, 2006, the Company, Eisai Inc., a Delaware corporation and Eisai Co., Ltd., a Japanese company (together with Eisai Inc., Eisai), entered into a purchase agreement (the Oncology Purchase Agreement) pursuant to which Eisai agreed to acquire all of the Company's worldwide rights in and to the Company's 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. For the years ended December 31, 2010 and 2009, the Company recognized pre-tax gains of \$0.2 million and \$1.0 million, respectively, due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date. For the year ended December 31, 2008, the Company recognized a \$10.6 million pre-tax loss resulting from the Salk settlement for \$13.0 million partially offset by a \$2.4 million pre-tax gain due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date.

The Company agreed to indemnify Eisai, after the closing, for damages suffered by Eisai arising from any breach of any of the Company's representations, warranties, covenants or obligations in the Oncology Purchase Agreement. The Company's obligation to indemnify Eisai extends beyond the closing up to, in some cases, 18 months or 36 months and, in other cases, until the expiration of the applicable statute of limitations. In a few instances, the Company's obligation to indemnify Eisai survives in perpetuity. The Company's liability for any indemnification claim brought by Eisai is generally limited to \$30.0 million. However, the Company's obligation to provide indemnification on certain matters is not subject to these indemnification limits. For example, the Company agreed to retain, and provide indemnification without limitation to Eisai for, all liabilities related to

## Table of Contents

certain claims regarding promotional materials for the ONTAK and Targretin drug products. Management cannot estimate the liabilities that may arise as a result of these matters and, therefore, no accrual has been recorded at December 31, 2010 and 2009.

Upon the Oncology sale, the Company accrued for rebates, chargebacks, and other discounts related to Oncology products in the distribution channel which had not sold-through at the time of the Oncology sale and for which the Company retained the liability subsequent to the sale. These products expired at various dates through July 31, 2008. The Company's accruals for Oncology rebates, chargebacks, and other discounts total zero and \$7,000 as of December 31, 2010 and 2009, respectively, and are included in accrued liabilities in the accompanying consolidated balance sheets.

Additionally, and pursuant to the terms of the Oncology Purchase Agreement, the Company retained the liability for returns of product from wholesalers that had been sold by the Company prior to the close of the transaction. Accordingly, as part of the accounting for the gain on the sale of the Oncology Product Line, the Company recorded a reserve for Oncology product returns. Oncology products sold by the Company may be returned through a specified period subsequent to the product expiration date, but no later than July 31, 2009. The Company's reserve for Oncology returns is zero as of December 31, 2010 and 2009.

### *AVINZA Product Line*

In February 2007, Ligand and King Pharmaceuticals, Inc. (King), entered into a purchase agreement (the AVINZA Purchase Agreement), pursuant to which King agreed to acquire all of the Company's 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 (collectively, the Transaction).

King also assumed Ligand's co-promote termination obligation to make payments to Organon based on net sales of AVINZA (\$30.9 million and \$58.5 million as of December 31, 2010 and 2009, respectively). As Organon has not consented to the legal assignment of the co-promote termination obligation from Ligand to King, Ligand remains liable to Organon in the event of King's default of this obligation. For the years ended December 31, 2010 and 2009, the Company recognized pre-tax gains of \$2.2 million and \$5.4 million, respectively, due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date. For the year ended December 31, 2008, the Company recognized an \$8.1 million pre-tax gain resulting from the release of funds from the escrow account and a \$1.5 million pre-tax gain due to subsequent changes in certain estimates of assets and liabilities recorded as of the sale date.

In addition to the assumption of existing royalty obligations, King is required to pay Ligand a royalty on AVINZA net sales. If calendar year net sales are less than \$200.0 million, the royalty payment will be 5% of all net sales. If calendar year net sales are greater than \$200.0 million, the royalty payment will be 10% of all net sales less than \$250.0 million, plus 15% of net sales greater than \$250.0 million. Royalty revenues were \$5.4 million, \$7.7 million and \$20.3 million in 2010, 2009 and 2008, respectively.

In connection with the sale, the Company has agreed to indemnify King for a period of 16 months after the closing of the Transaction for a number of specified matters, including any breach of the Company's representations, warranties or covenants contained in the asset purchase agreement. In certain defined cases, the Company's obligation to indemnify King extends for a period of 30 months following the closing of the Transaction. The AVINZA asset purchase agreement also allows King, under certain circumstances, to offset indemnification claims against the royalty payments payable to the Company. Under the asset purchase agreement, the Company's liability for any indemnification claim brought by King is generally limited to \$40.0 million. However, the Company's obligation to provide indemnification on certain matters is not subject to this indemnification limit. For example, the Company agreed to retain, and provide indemnification without limitation to King for all liabilities arising under certain agreements with Catalent related to the manufacture of

**Table of Contents**

AVINZA. The Company cannot predict the liabilities that may arise as a result of these matters. Any liability claims related to these matters or any indemnification claims made by King could materially and adversely affect the Company's financial condition. No accrual for potential losses under the indemnification has been recorded at December 31, 2010 and 2009.

Upon the AVINZA sale, the Company accrued for rebates, chargebacks, and other discounts related to AVINZA products in the distribution channel which had not sold-through at the time of the AVINZA sale and for which the Company retained the liability subsequent to the sale. These products expired at various dates through June 30, 2009. The Company's accruals for AVINZA rebates, chargebacks, and other discounts total zero and \$6,000 as of December 31, 2010 and 2009, respectively, and are included in accrued liabilities in the accompanying consolidated balance sheet.

Additionally, and pursuant to the terms of the AVINZA Purchase Agreement, the Company retained the liability for returns of product from wholesalers that had been sold by the Company prior to the close of the transaction. Accordingly, as part of the accounting for the gain on the sale of AVINZA, the Company recorded a reserve for AVINZA product returns. AVINZA products sold by the Company may be returned through a specified period subsequent to the product expiration date, but no later than December 31, 2009. The Company's reserve for AVINZA returns is zero and \$18,000 as of December 31, 2010 and 2009, respectively, and is included in accrued liabilities in the accompanying consolidated balance sheet. Additionally, in February 2011, the Company agreed to terms with a third party wholesaler for previously recorded liabilities associated with AVINZA returns resulting in a reduction of accounts payable and corresponding gain on sale of AVINZA product line before income taxes of \$2.1 million as of and for the year ended December 31, 2010.

**7. Investments**

As of December 31, 2010 and 2009, all of the Company's investments have a contractual maturity of less than one year. The following table summarizes the various investment categories (in thousands):

|                                    | Cost      | Gross<br>unrealized<br>gains | Gross<br>unrealized<br>losses | Estimated<br>fair<br>value |
|------------------------------------|-----------|------------------------------|-------------------------------|----------------------------|
| <b>December 31, 2010</b>           |           |                              |                               |                            |
| U.S. government securities         | \$ 2,031  | \$ 9                         | \$ (3)                        | \$ 2,037                   |
| Certificates of deposit            | 5,062     | 98                           |                               | 5,160                      |
| Corporate obligations              | 12,164    | 104                          | (114)                         | 12,154                     |
|                                    | 19,257    | 211                          | (117)                         | 19,351                     |
| Certificates of deposit restricted | 1,341     |                              |                               | 1,341                      |
| Total debt securities              | \$ 20,598 | \$ 211                       | \$ (117)                      | \$ 20,692                  |
| <b>December 31, 2009</b>           |           |                              |                               |                            |
| U.S. government securities         | \$ 19,118 | \$ 51                        | \$ (95)                       | \$ 19,074                  |
| Certificates of deposit            | 5,784     | 2                            | (2)                           | 5,784                      |
| Corporate obligations              | 11,866    | 486                          | (10)                          | 12,342                     |
|                                    | 36,768    | 539                          | (107)                         | 37,200                     |
| Certificates of deposit restricted | 1,341     |                              |                               | 1,341                      |
| Total debt securities              | \$ 38,109 | \$ 539                       | \$ (107)                      | \$ 38,541                  |

In July 2007, the Company purchased \$5.0 million of commercial paper issued by Golden Key Ltd. The investment was highly-rated and within the Company's investment policy at the time of purchase, but during the third quarter of 2007, large credit rating agencies downgraded the quality of this security. In addition, as a result of not meeting certain liquidity covenants, the assets of Golden Key Ltd. were assigned to a trustee who established a committee of the largest senior credit holders to determine the next steps. Subsequently, Golden





**Table of Contents**

Key Ltd. defaulted on its obligation to settle the security on the stated maturity date of October 10, 2007. During 2010, the assets of Golden Key Ltd. were sold through an auction process and, as a result, the Company received a final cash distribution of approximately \$2.9 million resulting in a gain of \$1.4 million, which is included in other income, net.

There were no other material realized gains or losses on sales of available-for-sale securities for the years ended December 31, 2010, 2009, and 2008.

**8. Other Balance Sheet Details**

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

|                   | <b>December 31,</b> |                 |
|-------------------|---------------------|-----------------|
|                   | <b>2010</b>         | <b>2009</b>     |
| Prepaid expenses  | \$ 578              | \$ 848          |
| Other receivables | 142                 | 516             |
|                   | <b>\$ 720</b>       | <b>\$ 1,364</b> |

Accrued liabilities consist of the following (in thousands):

|                        | <b>December 31,</b> |                 |
|------------------------|---------------------|-----------------|
|                        | <b>2010</b>         | <b>2009</b>     |
| Warrant liability      | \$                  | \$ 459          |
| Compensation           | 2,201               | 2,808           |
| Legal                  | 330                 | 134             |
| Lease exit obligations | 2,076               | 61              |
| Other                  | 6,252               | 6,035           |
|                        | <b>\$ 8,859</b>     | <b>\$ 9,497</b> |

The following summarizes the activity in the accounts related to allowances for loss on returns, rebates and chargebacks (in thousands):

|                                    | <b>Charge-backs<br/>and Rebates</b> | <b>Returns</b> | <b>Total</b> |
|------------------------------------|-------------------------------------|----------------|--------------|
| Balance at December 31, 2007       | \$ 2,216                            | \$ 15,059      | \$ 17,275    |
| AVINZA Transaction Provision (1)   | (857)                               | (211)          | (1,068)      |
| Oncology Transaction Provision (2) | (49)                                | (2,856)        | (2,905)      |
| Payments                           | (802)                               |                | (802)        |
| Charges                            |                                     | (2,910)        | (2,910)      |
| Balance at December 31, 2008       | 508                                 | 9,082          | 9,590        |
| AVINZA Transaction Provision (1)   | (28)                                | (5,463)        | (5,491)      |
| Oncology Transaction Provision (2) | (234)                               | (784)          | (1,018)      |
| Payments                           | (232)                               |                | (232)        |
| Charges                            |                                     | (2,818)        | (2,818)      |
| Balance at December 31, 2009       | 14                                  | 17             | 31           |
| Oncology Transaction Provision (2) | (14)                                |                | (14)         |

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|                              |    |      |      |
|------------------------------|----|------|------|
| Charges                      |    | (17) | (17) |
| Balance at December 31, 2010 | \$ | \$   | \$   |

**Table of Contents**

- (1) The AVINZA transaction provision amounts represent additional accruals recorded in connection with the sale of the AVINZA Product Line to King Pharmaceuticals, Inc. on February 26, 2007. The Company maintains the obligation for returns of product that were shipped to wholesalers prior to the close of the King transaction on February 26, 2007 and chargebacks and rebates associated with product in the distribution channel as of the closing date.
- (2) The 2007 Oncology transaction provision amounts represent changes in the estimates of the accruals for chargebacks and rebates recorded in connection with the sale of the Oncology Product Line.

*Other Long-Term Liabilities*

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

|                                       | <b>December 31,</b> |                 |
|---------------------------------------|---------------------|-----------------|
|                                       | <b>2010</b>         | <b>2009</b>     |
| Liability for contingent value rights | \$ 700              | \$ 700          |
| Deferred rent                         | 601                 | 1,165           |
| Deposits                              | 388                 | 388             |
| Litigation payment                    |                     | 1,000           |
|                                       | <b>\$ 1,689</b>     | <b>\$ 3,253</b> |

**9. 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 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).

**Table of Contents**

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 December 31, 2010 and 2009 is as follows (in thousands):

|  |           |
|--|-----------|
| Net present value of payments based on estimated future net AVINZA product sales as of December 31, 2008 | \$ 58,482 |
| Assumed payments made by King or assignee  | (8,525)   |
| Fair value adjustments due to passage of time  | (9,182)   |
| <br>   |           |
| Total co-promote termination liability as of December 31, 2009   | 40,775    |
| Less: remaining current portion of co-promote termination liability as of December 31, 2009              | (9,782)   |
| <br>   |           |
| Long-term portion of co-promote termination liability as of December 31, 2009                            | 30,993    |
| <br>   |           |
| Net present value of payments based on estimated future net AVINZA product sales as of December 31, 2009 | 40,775    |
| Assumed payments made by King or assignee  | (5,386)   |
| Fair value adjustments due to passage of time  | (4,504)   |
| <br>   |           |
| Total co-promote termination liability as of December 31, 2010   | 30,885    |
| Less: remaining current portion of co-promote termination liability as of December 31, 2010              | (8,034)   |
| <br>   |           |
| Long-term portion of co-promote termination liability as of December 31, 2010                            | \$ 22,851 |

**10. Warrant Liability**

In connection with the acquisition of Pharmacoepia, the Company assumed approximately 144,606 warrants to purchase its common stock. To qualify as permanent equity, an equity derivative must permit the issuer to settle in unregistered shares. Under securities law, if the warrants were issued in connection with a public offering and have a cash settlement feature at the holder's option, a company does not have the ability to settle in unregistered shares. Therefore, the warrants cannot be classified as permanent equity and are instead classified as a liability. The warrants issued as part of Pharmacoepia's equity financing in October 2006 meet this criterion, and have been recorded as a liability in the accompanying balance sheet. The fair value of the warrants will be remeasured at each reporting date until the warrants are exercised or have expired. Changes in the fair value of the warrants are reported in the statement of operations as income (decreases) or expense (increases).

At December 31, 2010 and 2009, the fair value of the warrants was approximately \$1,000 and \$0.5 million, respectively, and included in accrued liabilities.

The fair value of the warrants was calculated using the Black-Scholes option-pricing model with the following assumptions at December 31:

|                         | 2010      | 2009      |
|-------------------------|-----------|-----------|
| Risk-free interest rate | 0.3%      | 1.1%      |
| Dividend yield          |           |           |
| Expected volatility     | 44%       | 98%       |
| Expected term           | 1.3 years | 2.3 years |

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**Table of Contents****11. Commitments and Contingencies***ECLiPS® Royalties*

Under its license agreement with the Trustees of Columbia (Columbia) University and Cold Spring Harbor Laboratory (Cold Spring) (the License Agreement), the Company had an exclusive license for technology used in its proprietary combinatorial chemistry encoding technology, Encoded Combinatorial Libraries on Polymeric Support, or ECLiPS®. The License Agreement obligated the Company to pay a minimum annual license fee of \$0.1 million to both Columbia and Cold Spring. The License Agreement would have expired upon the later of (i) July 16, 2013 or (ii) the expiration of the last patent relating to the technology, at which time the Company would have a fully paid license to the technology. The license granted to the Company under the License Agreement could be terminated by Columbia and Cold Spring (i) upon 30 days written notice to the Company if the Company materially breached the Agreement and the Company failed to cure such material breach in accordance with the License Agreement or (ii) if the Company committed any act of bankruptcy, became insolvent, filed a petition under any bankruptcy or insolvency act or had any such petition filed against it that was not dismissed within 60 days. The Company was also obligated to pay royalties to Columbia and Cold Spring based on net sales of pharmaceutical products the Company develops, as well as a percentage of all other revenue the Company recognized from collaborators that was derived from the technology licensed from Columbia and Cold Spring. In September 2010, in conjunction with the sale of its combinatorial chemical library, the Company transferred the license and related obligations to a third party.

*Property Leases*

In August 2009, the Company entered into a lease termination agreement for its 82,500 square foot office and laboratory facility in San Diego, California, which had a lease term through November 2021. Under the terms of the termination agreement, the Company will pay a termination fee of \$14.3 million as follows: \$4.5 million was paid upon signing, \$4.5 million was paid in July 2010 and \$5.3 million is due in April 2011. As a result, in 2009, the Company recorded lease termination costs of \$15.2 million, which included the net present value of the lease termination payments of \$14.3 million and \$0.9 million of other direct costs associated with the lease termination. The Company may be required to deliver to the landlord an irrevocable letter of credit for the then-outstanding termination fee if it does not maintain cash and investments of at least \$30.0 million prior to the date upon which the second payment is due and cash and investments of at least \$20.0 million prior to the date upon which the final payment is due. The Company must also maintain a current ratio of at least 110% measured monthly. In addition, the Company entered into a new 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 new corporate headquarters. Under the terms of the new 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.

The Company also 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. The Company recorded a net charge to operating expenses of \$4.3 million for exit costs when it fully ceased use of this facility in the first quarter of 2008. The net charge consisted of a \$6.5 million charge for future rent payments offset by a \$2.3 million reversal of deferred rent.

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 December 31, 2010, the Company expects to receive \$0.3 million in aggregate future lease payments over the duration of the sublease agreement.

**Table of Contents**

In September 2010, the Company ceased use 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. In addition, the Company wrote-off approximately property and equipment with a net book value of \$5.4 related to the facility closure.

As of December 31, 2010, annual minimum payments due under the Company's office and equipment lease obligations and annual minimum rentals expected to be received by the Company under subleases are as follows (in thousands):

| Year ending December 31, | Operating leases | Sublease Income | Net Payments |
|--------------------------|------------------|-----------------|--------------|
| 2011                     | \$ 6,032         | \$ 946          | \$ 5,086     |
| 2012                     | 4,828            | 971             | 3,857        |
| 2013                     | 4,891            | 998             | 3,893        |
| 2014                     | 4,956            | 994             | 3,962        |
| 2015                     | 4,048            | 479             | 3,569        |
| Thereafter               | 1,811            |                 | 1,811        |
|                          | \$ 26,566        | \$ 4,388        | \$ 22,178    |

Total rent expense under all office leases for 2010, 2009 and 2008 was \$2.8 million, \$5.1 million and \$11.0 million, respectively. The Company recognizes rent expense on a straight-line basis. Deferred rent at December 31, 2010 and 2009 was \$0.6 million and \$1.6 million, respectively, and is included in other long-term liabilities.

*Product Liability*

The Company's business exposes it to potential product liability risks. The Company's products also may need to be recalled to address regulatory issues. A successful product liability claim or series of claims brought against the Company could result in payment of significant amounts of money and divert management's attention from running the business. Some of the compounds the Company is investigating may be harmful to humans. For example, retinoids as a class are known to contain compounds which can cause birth defects. The Company may not be able to maintain insurance on acceptable terms, or the insurance may not provide adequate protection in the case of a product liability claim. To the extent that product liability insurance, if available, does not cover potential claims, the Company would be required to self-insure the risks associated with such claims. No reserve for any potential losses under product liability claims has been recorded at December 31, 2010 and 2009.

*Litigation*

In February 2009, the Company reached a settlement with The Rockefeller University whereby the parties resolved all disputes that have arisen between them. As part of the settlement, the Company agreed to pay Rockefeller, \$5.0 million immediately upon settlement, \$1.0 million on or before February 10, 2010, \$1.0 million on or before February 10, 2011, and 50% of any milestone payment and 5.88% to 7.0% of certain royalties, in each case received by the Company pursuant to an agreement with SmithKline Beecham Corporation (now known as GlaxoSmithKline) entered into on December 29, 1994. The Company also agreed to pay Rockefeller 1.5% of world-wide net sales of LGD-4665 as certain payments are received by the Company pursuant to its agreement with SmithKline Beecham Corporation entered into on December 17, 2008. As of December 31, 2010, the Company has recorded a liability of \$1.0 million related to the settlement, which is included in current portion of accrued litigation settlement costs in the accompanying balance sheets.

**Table of Contents**

In addition, 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.

**12. 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 the exchange ratio of \$74.25 per share. 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. In March 2009, the Company earned a milestone from Pfizer, Inc. (Pfizer). In April 2009, pursuant to the Company's 1991 research agreement and 1996 settlement agreement with Pfizer, Pfizer elected to pay the milestone by returning 53,889 shares of stock it owns in the Company, which at the date the milestone was earned had a market value of \$0.9 million. Ligand retired the tendered shares in May 2009. The difference between the fair value of the shares tendered and the carrying value of such shares based on the contractual exchange ratio, approximately \$3.1 million, was credited to additional paid-in capital. The Company is entitled to royalties on future sales from Pfizer, which pursuant to the 1996 settlement agreement, Pfizer may elect to pay by returning shares of stock it owns in Ligand. At December 31, 2010 and 2009, the remaining shares of the Company's common stock that could be redeemed totaled approximately 112,371 and are reflected at the exchange ratio price of \$74.25.

**13. Stockholders Equity***Stock Plans*

On May 29, 2009, the Company's stockholders approved the amendment and restatement of the Company's 2002 Stock Incentive Plan (the Amended 2002 Plan). The Company's 2002 Stock Incentive Plan was amended to (i) increase the number of shares available for issuance under the Amended 2002 Plan by 1,266,666 shares, (ii) revise the list of performance criteria that may be used by the compensation committee for purposes of granting awards under the Amended 2002 Plan that are intended to qualify as performance-based compensation under Section 162(m) of the Internal Revenue Code, as amended, and (iii) eliminate the automatic option grant program for non-employee directors, the director fee stock issuance program and the director fee option grant program, which programs have been superseded by the Company's amended and restated Director Compensation Policy. As of December 31, 2010, there were 2.1 million shares available for future option grants or direct issuance under the Amended 2002 Plan.

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

Stock-based compensation cost 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 \$2.3 million, \$3.4 million and \$3.6 million for 2010, 2009 and 2008, respectively, associated with option awards,



**Table of Contents**

restricted stock and an equitable adjustment of employee stock options. The compensation expense related to share-based compensation arrangements is recorded as components of research and development expenses (\$1.2 million, \$2.0 million and \$1.0 million) and general and administrative expenses (\$1.1 million, \$1.4 million and \$2.6 million) for the years ended December 31, 2010, 2009 and 2008, respectively. There was no deferred tax benefit recognized in connection with these costs.

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:

|                         | Year Ended December 31, |         |         |
|-------------------------|-------------------------|---------|---------|
|                         | 2010                    | 2009    | 2008    |
| Risk-free interest rate | 2.7%                    | 2.1%    | 3.0%    |
| Dividend yield          |                         |         |         |
| Expected volatility     | 72%                     | 74%     | 65%     |
| Expected term           | 6 years                 | 6 years | 6 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, the Company used the historical volatility of the Company's stock price over a period equal to the expected term.

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

|                                  | Shares    | Weighted<br>Average<br>Exercise<br>Price | Weighted-<br>Average<br>Remaining<br>Contractual<br>Term in<br>Years | Aggregate<br>Intrinsic<br>Value<br>(In<br>thousands) |
|----------------------------------|-----------|--|--|--|
| Balance at January 1, 2008       | 370,505   | \$ 53.22                                 | 5.17   | \$ 304   |
| Granted                          | 217,416   | 21.12                                    |  |  |
| Exercised                        | (739)     | 20.46                                    |  |  |
| Forfeited                        | (17,843)  | 41.28                                    |  |  |
| Cancelled                        | (64,326)  | 57.84                                    |  |  |
| Balance at December 31, 2008     | 505,013   | 39.30                                    | 6.63   | 81   |
| Granted                          | 275,308   | 15.84                                    |  |  |
| Exercised                        | (3,541)   | 12.18                                    |  |  |
| Forfeited                        | (52,581)  | 24.00                                    |  |  |
| Cancelled                        | (55,752)  | 50.46                                    |  |  |
| Balance at December 31, 2009     | 668,447   | 30.10                                    | 6.88   | 31   |
| Granted                          | 248,202   | 9.87                                     |  |  |
| Exercised                        |           |  |  |  |
| Forfeited                        | (130,183) | 14.31                                    |  |  |
| Cancelled                        | (145,205) | 48.26                                    |  |  |
| Balance at December 31, 2010     | 641,261   | 21.36                                    | 7.00   | 9  |
| Exercisable at December 31, 2010 | 372,371   | 26.57                                    | 6.13   | 6  |

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|  |         |       |      |   |
|--|---------|-------|------|---|
| Options expected to vest as of December 31, 2010 | 641,261 | 21.36 | 7.00 | 9 |
|--|---------|-------|------|---|

**Table of Contents**

The weighted-average grant-date fair value of all stock options granted during 2010 was \$6.31 per share. The total intrinsic value of all options exercised during 2010, 2009 and 2008 was approximately \$0, \$2,000 and \$3,000, respectively. As of December 31, 2010, there was \$3.1 million of total unrecognized compensation cost related to nonvested stock options. That cost is expected to be recognized over a weighted average period of 2.4 years.

Cash received from options exercised in 2010, 2009 and 2008 was \$0, \$43,000 and \$15,000, respectively. There is no current tax benefit related to options exercised because of Net Operating Losses (NOLs) for which a full valuation allowance has been established.

Following is a further breakdown of the options outstanding as of December 31, 2010:

| Range of exercise prices | Options Outstanding |  |                                 | Options exercisable |                                 |
|--------------------------|---------------------|--|---------------------------------|---------------------|---------------------------------|
|                          | Options outstanding | Weighted average remaining life in years | Weighted average exercise price | Options exercisable | Weighted average exercise price |
| \$0.01 \$ 9.95           | 23,977              | 3.09                                     | \$ 8.69                         | 9,441               | \$ 8.30                         |
| 9.96 9.96                | 153,037             | 8.93                                     | 9.96                            | 34,513              | 9.96                            |
| 9.97 16.13               | 15,026              | 6.59                                     | 11.56                           | 7,629               | 12.23                           |
| 16.14 16.14              | 168,574             | 7.82                                     | 16.14                           | 84,890              | 16.14                           |
| 16.15 87.96              | 280,647             | 5.81                                     | 32.33                           | 235,898             | 33.94                           |
| 0.01 87.96               | 641,261             | 7.00                                     | 21.36                           | 372,371             | 26.57                           |

*Restricted Stock Activity*

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

|                                | Shares   | Weighted-Average Grant Date Fair Value |
|--------------------------------|----------|--|
| Nonvested at January 1, 2008   | 49,266   | 59.40                                  |
| Granted                        | 72,333   | 20.28                                  |
| Vested                         | (18,335) | 65.52                                  |
| Forfeited                      | (3,486)  | 32.58                                  |
| Nonvested at December 31, 2008 | 99,778   | 30.84                                  |
| Granted                        | 59,743   | 15.78                                  |
| Vested                         | (49,707) | 36.84                                  |
| Forfeited                      | (14,099) | 21.06                                  |
| Nonvested at December 31, 2009 | 95,715   | 17.93                                  |
| Granted                        | 60,349   | 9.60                                   |
| Vested                         | (65,375) | 16.70                                  |
| Forfeited                      | (28,543) | 12.56                                  |
| Nonvested at December 31, 2010 | 62,146   | 13.60                                  |

Restricted stock awards generally vest over three years. As of December 31, 2010, unrecognized compensation cost related to non-vested stock awards amounted to \$0.5 million. That cost is expected to be recognized over a weighted average period of 1.5 years.



## **Table of Contents**

### *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 a limited amount of 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 14,888, 22,443 and 7,702 shares of common stock issued under the Amended ESPP in 2010, 2009 and 2008, respectively, resulting in an expense of \$0.1 million, \$0.1 million and \$0.03 million, respectively. For shares purchased under the Company's Amended ESPP, a weighted-average expected volatility of 34%, 27% and 60% was used for 2010, 2009 and 2008, respectively. The expected term for shares issued under the ESPP is six months. As of December 31, 2010, 183,286 shares of common stock had been issued under the Amended ESPP to employees and 104,902 shares are available for future issuance.

### *Preferred Stock*

The Company has authorized 833,333 shares of preferred stock, of which 266,666 are designated Series A Participating Preferred Stock (the Preferred Stock). The Board of Directors of Ligand has the authority to issue the Preferred Stock in one or more series and to fix the designation, powers, preferences, rights, qualifications, limitations and restrictions of the shares of each such series, including the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), liquidation preferences and the number of shares constituting any such series, without any further vote or action by the stockholders. The rights and preferences of Preferred Stock may in all respects be superior and prior to the rights of the common stock. The issuance of the Preferred Stock could decrease the amount of earnings and assets available for distribution to holders of common stock or adversely affect the rights and powers, including voting rights, of the holders of the common stock and could have the effect of delaying, deferring or preventing a change in control of Ligand. As of December 31, 2010 and 2009, there are no preferred shares issued or outstanding.

### *Shareholder Rights Plan*

In October 2006, the Company's Board of Directors renewed the Company's stockholder rights plan, which was originally adopted and has been in place since September 2002, and which expired on September 13, 2006, through the adoption of a new 2006 Stockholder Rights Plan (the 2006 Rights Plan). The 2006 Rights Plan provides for a dividend distribution of one preferred share purchase right (a Right) on each outstanding share of the Company's common stock. Each Right entitles stockholders to buy 1/1000th of a share of Ligand Series A Participating Preferred Stock at an exercise price of \$100. The Rights will become exercisable if a person or group announces an acquisition of 20% or more of the Company's common stock, or announces commencement of a tender offer for 20% or more of the common stock. In that event, the Rights permit stockholders, other than the acquiring person, to purchase the Company's common stock having a market value of twice the exercise price of the Rights, in lieu of the Preferred stock. In addition, in the event of certain business combinations, the Rights permit the purchase of the common stock of an acquiring person at a 50% discount. Rights held by the acquiring person become null and void in each case. The 2006 Rights Plan expires in 2016.

### *Shares Issued in Business Combination*

On December 23, 2009, in connection with its acquisition of Neurogen Corporation, the Company issued 700,000 shares of common stock to Neurogen stockholders, or 0.0101 shares for each outstanding Neurogen share.

## **Table of Contents**

On December 23, 2008, in connection with its acquisition of Pharmacoepia, the Company issued 2,999,506 shares of common stock to Pharmacoepia stockholders, or 0.0998 shares for each outstanding Pharmacoepia share.

### *Warrants*

As of December 31, 2010, 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, and warrants to purchase 17,592 shares of the Company's common stock were outstanding with an exercise price of \$56.82 per share and an expiration date of March 2011. The two series of warrants were assumed in the acquisition of Pharmacoepia, Inc.

As of December 31, 2010, 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*

In March 2007, the Board of Directors authorized up to \$100.0 million in share repurchases over the subsequent 12 months. Through February 2008, the Company repurchased 1.1 million shares of its common stock totaling \$41.2 million.

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 December 31, 2010, the Company repurchased 10,682 shares of its common stock totaling \$0.1 million.

### *Share Reserves*

As of December 31, 2010, the Company had 1.2 million shares reserved for future issuance related to stock options, stock awards, stock purchase plan and warrants.

### *Reverse Stock Split*

On November 19, 2010, following approval from the Company's stockholders at a special meeting of stockholders on September 9, 2010, the Company announced a 1-for-6 reverse stock split of its common stock. Accordingly, all share, warrant, option and per share information for all periods presented has been restated to account for the effect of the reverse stock split.

## **14. Collaboration Agreements**

The Company has entered into multiple research and development collaboration arrangements with third party pharmaceutical companies. The commercial terms of such arrangements typically include some combination of the following types of fees: exclusivity fees, technology access fees, technology development fees and research support payments, as well as milestone payments, license or commercialization fees. The Company may also receive royalties on product candidates resulting from its research and development collaboration arrangements if and to the extent any such product candidate is ultimately approved by the FDA and successfully marketed. The Company's collaborations are discussed below.

## **Table of Contents**

### ***Bristol-Myers Squibb Collaborations***

In connection with the acquisition of Pharmacoepia, the Company assumed a discovery collaboration agreement with BMS to provide a portion of its medicinal chemistry resources to a BMS discovery program unrelated to the SARM program for a period up to three years beginning in October 2007. The discovery collaboration agreement provided that each such year, the Company was required to provide a fixed number of full-time workers for the BMS discovery program, divided between employees located at its facility in Cranbury, New Jersey and contracted headcount located outside the United States.

In December 2009, the Company and BMS entered into an amendment to the discovery collaboration agreement. Pursuant to the terms of the Amendment, the research term under the Collaboration Agreement terminated on December 31, 2009 and the research program under the Collaboration Agreement was transferred to BMS. The Company is no longer obligated to provide research support to BMS after December 31, 2009, other than providing certain data and compound transfer services to BMS through June 30, 2010. In connection with the Amendment, the Company paid \$1.0 million to BMS in January 2010 and BMS is no longer required to make milestone payments to the Company under the Collaboration Agreement.

As of December 31, 2010 and 2009, the Company had deferred revenue of zero and \$0.3 million, respectively, related to BMS agreements.

### ***GlaxoSmithKline Collaboration***

In connection with the completion of the Company's acquisition of Pharmacoepia, the Company assumed a product development and commercialization agreement which Pharmacoepia and SmithKlineBeecham Corporation and Glaxo Group Limited (together GSK) entered into in March 2006. The Company's role in the collaboration was to identify and advance molecules in chosen therapeutic programs to development stage and, subject to certain provisions in the GSK agreement, further develop the candidates to clinical proof of concept (a demonstration of efficacy in humans). The Company agreed that it will not screen its compound library for other collaborators, or for its own account, against any target it screens under the GSK agreement for a specified period.

The GSK agreement provides GSK an exclusive option, exercisable at defined points during the development process for each program up to proof of concept, to license that program. Upon licensing a program, GSK is obligated to conduct preclinical development and/or clinical trials and commercialize pharmaceutical products, if any, resulting from such licensed programs on a worldwide basis. The Company is entitled to receive success-based milestone payments, starting in preclinical research, from GSK for each drug development program under the alliance and the potential for double-digit royalties upon the successful commercialization by GSK of any product resulting therefrom.

In the event that GSK does not exercise its option to license a program, the Company will retain all rights to that program and may continue to develop the program and commercialize any products resulting from the program, or the Company may elect to cease progressing the program and/or seek other partners for further development and commercialization. Should the Company develop or partner such a program and commercialize any products resulting from that program, it will be obligated to pay GSK success-based milestone payments and royalties upon successful commercialization, if any.

Pharmacoepia received \$15.0 million in connection with initial discovery activities which the Company is obligated to perform under the GSK agreement. The Company recognizes revenue on a percentage of completion basis as it performs the required discovery activities in an amount from time to time less than or equal to the non-refundable portion of payments received in connection with the GSK agreement. The initial research term of the GSK agreement was set to expire in March 2011. However, in September 2010, GSK exercised its right to terminate the agreement effective October 7, 2010. As a result of the termination, the Company was not required

## **Table of Contents**

to refund any payments received related to its performance of initial discovery activities or milestone payments and the Company retained the rights to the current programs under the agreement. As of December 31, 2010 and 2009, the Company had deferred revenue of zero and \$3.7 million, respectively, related to GSK agreements.

### ***Pfizer Collaborations***

#### ***JAK3 Program***

In connection with the completion of the Company's acquisition of Pharmacoepia, the Company assumed a research and license agreement with Pfizer (formerly Wyeth), acting through its Wyeth Pharmaceuticals Division, providing for the formation of a new alliance based on Pharmacoepia's Janus Kinase-3, or JAK3, inhibitor program. The alliance's goal was to identify, develop and commercialize therapeutic products for the treatment of certain immunological conditions in humans.

Each of the companies has certain exclusive rights to develop and commercialize products resulting from the JAK3 program and the alliance. The Company retains the right to develop and commercialize therapeutic products for the treatment of dermatological and ocular diseases employing topical administration, and Pfizer has the right to develop human therapeutic products for all other indications and routes of delivery. Under the terms of the Pfizer agreement, Pharmacoepia received an up-front cash payment and received quarterly research funding through December 2009. In November 2009, Pfizer exercised its right under the contract and extended the research term and related quarterly research funding through December 2010. In July 2010, the Company and Pfizer entered into an asset purchase agreement whereby the collaboration agreement was terminated and Pfizer purchased certain compounds, patents, protocols, data and know-how relating to the JAK-3 program for an aggregate \$3.0 million.

As of December 31, 2010 and 2009, the Company had deferred revenue of zero and \$0.9 million, respectively, related to Pfizer agreements.

### ***Merck (formerly Schering-Plough Collaboration)***

#### ***2007 Collaboration***

In connection with the completion of the Company's acquisition of Pharmacoepia, the Company assumed an amended and restated collaboration and license agreement with N.V. Organon, entered into in February 2007. In November 2007, Organon was acquired by, and is now a part of, Merck (formerly Schering-Plough). Under the agreement, Pharmacoepia agreed to work collaboratively with Merck to generate lead compounds at targets in mutual therapeutic areas selected by Merck and agreed upon by a joint research committee. The purpose of the agreement was to produce development-ready compounds, the potential development of which will be handled primarily by Merck. The agreement provided that the Company would receive up to \$4.0 million per year from Merck in research funding over the remaining portion of the five-year term of the agreement.

Pursuant to the agreement the Company has the option to purchase the right to co-develop and co-commercialize certain therapeutic candidates of mutual interest discovered through the alliance. For the therapeutic candidates that the Company does not elect to co-develop and co-commercialize, Schering-Plough will retain exclusive development and commercialization rights, and the Company will receive milestone payments as a result of Merck's successful advancement, if any, of each candidate through clinical development. The Company will also receive up to double-digit royalties on net sales, if any, of pharmaceutical products resulting from the collaboration when the lead optimization was conducted by the Company, and lower royalties when the lead optimization was conducted by Merck.

On July 29, 2009, the Company and Merck mutually agreed to terminate the research collaboration under their collaboration and license agreement pursuant to which the parties agreed to work collaboratively to discover, develop and commercialize therapeutic products across a broad range of indications. As a result of the



**Table of Contents**

termination, Merck continued to fund research collaboration activities on those targets currently under investigation through December 2009, and the Company is eligible to receive potential milestone payments and royalties under certain circumstances.

As of December 31, 2010 and 2009, the Company had deferred revenue of zero and \$0.4 million, respectively, related to Merck.

**Trevena Collaboration**

In February 2009, the Company announced the initiation of a joint research and license alliance to screen targets using Trevena's novel biological platform against its combinatorial library of compounds, to identify active compounds with potential for development as novel G-protein coupled receptor (GPCR) therapeutics.

Under the terms of the agreement, Trevena has been granted exclusive worldwide rights to sublicense active compounds resulting from the collaboration. The Company expects to screen targets and receive payments triggered by a tiered screening paradigm for each target.

As of December 31, 2010 and 2009, the Company had deferred revenue of zero and \$0.6 million, respectively, related to Trevena.

**15. Income Taxes**

At December 31, 2010, the Company has federal net operating loss carryforwards of \$438.2 million and \$181.1 million of state net operating loss carryforwards. The Company also has \$16.4 million of federal research and development credit carryforwards. Federal research and development credit carryforwards of \$0.8 million expired at the beginning of 2010 with the remainder expiring through 2027, and the Company has \$10.3 million of California and New Jersey research and development credit carryforwards that have no expiration date.

Pursuant to Internal Revenue Code Section 382, use of net operating loss and credit carryforwards may be limited if the Company experiences a cumulative change in ownership of greater than 50% in a moving three-year period. Ownership changes could impact the Company's ability to utilize net operating loss and credit carryforwards remaining at an ownership change date. The Company has not updated its Section 382 study since 2007. The utilization of the net operating losses may be subject to limitation under Internal Revenue Codes Section 382.

The components of the income tax benefit for continuing operations are as follows (in thousands):

|                          | Year Ended December 31, |             |       |
|--------------------------|-------------------------|-------------|-------|
|                          | 2010                    | 2009        | 2008  |
| <b>Current Benefit:</b>  |                         |             |       |
| Federal                  | \$ 27,685               | \$ (23,533) | \$ 27 |
| State                    |                         |             |       |
| Foreign                  |                         |             | 28    |
|                          | 27,685                  | (23,533)    | 55    |
| <b>Deferred Benefit:</b> |                         |             |       |
| Federal                  | (25,068)                | 25,068      |       |
| State                    |                         |             |       |
| Foreign                  |                         |             |       |
|                          | \$ 2,617                | \$ 1,535    | \$ 55 |

**Table of Contents**

Significant components of the Company's deferred tax assets and liabilities as of December 31, 2010 and 2009 are shown below. A valuation allowance has been recognized to offset the net deferred tax assets as management believes realization of such assets is not more-likely-than-not as of December 31, 2010. For the year ended December 31, 2009, a valuation allowance was recognized to offset the net deferred tax assets, other than the net operating losses which were to be utilized via carry-back to the 2006 and 2007 income tax years, as management believed realization of such assets was not more-likely-than-not.

|   | December 31,   |            |
|---|----------------|------------|
|   | 2010           | 2009       |
|   | (in thousands) |            |
| Deferred assets:                            |                |            |
| Net operating loss carryforwards            | \$ 157,395     | \$ 184,075 |
| Research and AMT credit carryforwards       | 23,182         | 29,093     |
| Fixed assets and intangibles                | 17,824         | 4,785      |
| Accrued expenses                            | 6,697          | 269        |
| Deferred revenue                            |                | 1,420      |
| Present value of AVINZA royalties           | 14,586         | 16,633     |
| Organon termination asset                   | (11,937)       | (15,727)   |
| Organon termination liability               | 11,937         | 15,727     |
| Organon royalty obligation                  | 570            | 569        |
| Deferred sale leaseback                     | 658            | 1,313      |
| Lease termination costs                     | 4,244          | 5,698      |
| Capital loss carryforwards                  | 751            |            |
| Other                                       | 2,681          | 5,366      |
|   | 228,588        | 249,992    |
| Valuation allowance for deferred tax assets | (228,588)      | (224,924)  |
| Net deferred tax assets                     | \$             | \$ 25,068  |
| Net deferred tax liabilities                | \$ 372         | \$         |

For 2010 and 2009, stock option deductions did not impact the valuation allowance through paid-in capital. Other changes to the valuation allowance allocated directly to accumulated other comprehensive income (loss) are related to unrealized gains and losses of \$0.1 million, \$0.01 million and \$0.02 million for 2010, 2009, and 2008, respectively.

**Table of Contents**

A reconciliation of income tax benefit for continuing operations to the amount computed by applying the statutory federal income tax rate to the loss from continuing operations is summarized as follows (in thousands):

|  | Years Ended December 31, |          |           |
|--|--------------------------|----------|-----------|
|  | 2010                     | 2009     | 2008      |
| Amounts computed at statutory federal rate | \$ 5,236                 | \$ 3,387 | \$ 33,155 |
| State taxes net of federal benefit         | (2)                      | 234      | (2,293)   |
| Effect of foreign operations               |                          |          | 28        |
| Meals & entertainment                      | (6)                      | (10)     | (7)       |
| In process R&D                             | (451)                    | (136)    | (24,480)  |
| Therapeutic grant                          | 665                      |          |           |
| Inputed interest                           | (321)                    |          |           |
| Roche collaboration                        | (1,437)                  |          |           |
| Contingent value rights                    | 3,108                    |          |           |
| Stock-based compensation                   | (510)                    | (1,144)  | (537)     |
| Expired NOLs                               | (678)                    | (678)    | (678)     |
| Expired research and development credits   | (543)                    | (887)    | (155)     |
| Change in uncertain tax positions          | 28,108                   | (24,116) |           |
| Carry back claims                          |                          | 25,651   |           |
| Change in valuation allowance              | (30,557)                 | (775)    | (5,019)   |
| Other                                      | 5                        | 9        | 41        |
|  | \$ 2,617                 | \$ 1,535 | \$ 55     |

Tax positions must meet a minimum probability threshold that a tax position must meet before a financial statement benefit is recognized. The minimum threshold is defined as 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. As of the date of adoption, the Company's gross liability for income taxes associated with uncertain tax positions totaled \$8.9 million. As a result of adopting the new standard, the Company recognized an increase of \$0.4 million to reserve for uncertain tax positions which was recorded as a cumulative effect adjustment to accumulated deficit.

In December 2009, the Internal Revenue Service, or IRS, issued the Company a Notice of Proposed Adjustment, or NOPA, seeking an increase to its taxable income for the 2007 fiscal year of \$71.5 million and a \$4.1 million penalty for substantial underpayment of tax in fiscal 2007. As of December 31, 2009, the Company recorded a liability of \$25.1 million related to the income tax effect of the NOPA and \$3.0 million related to estimated interest due on the proposed underpayment of tax. The Company also recorded deferred income tax assets of \$25.1 million associated with the ability to carry back losses from 2008 and 2009 to offset the NOPA. In addition, the Company recorded an income tax receivable of \$4.5 million associated with changes in income tax law in relation to prior AMT taxes paid on carry back periods, which is included in other non-current assets at December 31, 2009. In November 2010, the IRS granted the Company an extension of time to make a closing-of-the-books election with respect to an ownership change, within the meaning of section 382 of the Internal Revenue Code, for the 2007 tax year. The Company filed an amended 2007 federal tax return in the fourth quarter of 2010. As a result, during 2010 the Company recorded an income tax benefit of \$2.6 million related to the reversal of estimated interest for the proposed substantial underpayment of tax in fiscal 2007.

**Table of Contents**

A reconciliation of the amount of unrecognized tax benefits at December 31, 2010 and 2009 is as follows (in thousands):

|  |          |
|--|----------|
| Balance at December 31, 2008                                 | 9,527    |
| Additions based on tax positions related to the current year | 25,068   |
| Reductions for tax positions of prior years                  | (569)    |
| Balance at December 31, 2009                                 | 34,026   |
| Additions based on tax positions related to the current year |          |
| Reductions for tax positions of prior years                  | (25,205) |
| Balance at December 31, 2010                                 | \$ 8,821 |

Included in the balance of unrecognized tax benefits at December 31, 2009 is \$8.8 million of tax benefits that, if recognized would result in adjustments to the related deferred tax assets and valuation allowance and not affect the Company's effective tax rate.

The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. As of December 31, 2010, there was no accrued interest related to uncertain tax positions.

All of the Company's tax years from 1994-2009 remain open to examination by the major taxing jurisdictions to which the Company is subject.

On November 1, 2010, the Company was notified by the Internal Revenue Service that it had received grants totaling \$2.0 million in response to applications submitted for qualified investments in a qualifying therapeutic discovery project under section 48D of the Internal Revenue Code, which are included in other income, net for the year ended December 31, 2010.

**16. Summary of Unaudited Quarterly Financial Information**

The following is a summary of the unaudited quarterly results of operations for the years ended December 31, 2010 and 2009 (in thousands, except per share amounts).

|  | Quarter ended |           |              |             |
|--|---------------|-----------|--------------|-------------|
|  | March 31      | June 30   | September 30 | December 31 |
| <b>2010</b>                              |               |           |              |             |
| Total revenues                           | \$ 5,958      | \$ 5,838  | \$ 7,802     | \$ 3,940    |
| Total operating costs and expenses       | 10,410        | 9,892     | 23,903       | 10,328      |
| Income tax benefit (expense)             | (274)         | (625)     | (419)        | 3,936       |
| Income (loss) from continuing operations | (2,989)       | (290)     | (11,855)     | 2,348       |
| Discontinued operations                  | 239           | 7         | 12           | 2,155       |
| Net income (loss)                        | \$ (2,750)    | \$ (283)  | \$ (11,843)  | \$ 4,503    |
| Basic and diluted per share amounts:     |               |           |              |             |
| Loss from continuing operations          | (0.15)        | (0.01)    | (0.60)       | 0.12        |
| Discontinued operations                  | 0.01          | 0.00      | 0.00         | 0.11        |
| Net loss                                 | \$ (0.14)     | \$ (0.01) | \$ (0.60)    | \$ 0.23     |
| Weighted average shares - basic          | 19,576        | 19,609    | 19,630       | 19,631      |
| Weighted average shares - diluted        | 19,576        | 19,609    | 19,630       | 19,636      |



**Table of Contents**

|  | Quarter ended |            |              |             |
|--|---------------|------------|--------------|-------------|
|  | March 31      | June 30    | September 30 | December 31 |
| <b>2009</b>                              |               |            |              |             |
| Total revenues                           | \$ 9,470      | \$ 7,594   | \$ 7,901     | \$ 13,974   |
| Total operating costs and expenses       | 17,279        | 12,742     | 27,571       | 13,148      |
| Income tax benefit (expense)             |               |            |              |             |
| Income (loss) from continuing operations | (7,482)       | (4,476)    | 1,055        | 2,566       |
| Discontinued operations                  | 2,366         | 2,808      | 748          | 467         |
| Net income (loss)                        | \$ (5,116)    | \$ (1,668) | \$ 1,803     | \$ 3,033    |
| Basic and diluted per share amounts:     |               |            |              |             |
| Loss from continuing operations          | (0.40)        | (0.24)     | 0.06         | 0.14        |
| Discontinued operations                  | 0.13          | 0.15       | 0.04         | 0.02        |
| Net loss                                 | \$ (0.27)     | \$ (0.09)  | \$ 0.10      | \$ 0.16     |
| Weighted average shares basic            | 18,853        | 18,858     | 18,834       | 18,897      |
| Weighted average shares diluted          | 18,853        | 18,858     | 18,856       | 18,918      |

**17. Sale Leaseback**

In October 2006, the Company entered into an agreement for the sale of its real property located in San Diego, California for a purchase price of \$47.6 million. This property, with a net book value of \$14.5 million, included one building totaling approximately 82,500 square feet, the land on which the building is situated, and two adjacent vacant lots. As part of the sale transaction, the Company agreed to lease back the building for a period of 15 years.

The Company recognized an immediate pre-tax gain on the sale transaction of \$3.1 million in 2006 and deferred a gain of \$29.5 million on the sale of the building. The deferred gain was being recognized as an offset to operating expense 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, the Company entered into a lease termination agreement for this building. As a result, the Company recognized an additional \$20.4 million of accretion of deferred gain during the quarter ended September 30, 2009, and will recognize the remaining balance of the deferred gain of \$3.1 million through the term of its new building lease, which expires in December 2011. The amount of the deferred gain recognized for the years ended December 31, 2010, 2009 and 2008 was \$1.7 million, \$21.9 million and \$2.0 million, respectively.

**18. Reductions in Workforce**

In December 2010, the Company reduced its workforce by twenty-six positions, twenty of which were eliminated effective December 31, 2010 and six were eliminated in early 2011. Accrued severance costs of \$1.1 million were included in accrued compensation as of December 31, 2010.

**19. Subsequent Event**

On January 24, 2011, the Company acquired CyDex Pharmaceuticals, Inc. ( CyDex ), 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 Prism Pharmaceuticals. In addition, CyDex is supporting drug development efforts with more than 40 companies worldwide.

**Table of Contents**

CyDex shareholders will receive \$31.2 million for the merger in upfront cash, a \$4.3 million cash payment on the one year anniversary of closing, and will be entitled to contingent cash payments related to certain transactions and pursuant to a revenue share plan. In addition, CyDex shareholders received approximately \$0.8 million at close for an adjustment to working capital.

In connection with the acquisition, the Company borrowed \$20 million from a lender. Under the terms of the 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. Additionally, a one-time payment of \$1.2 million is due at the end of the note term.

Due to the close proximity of the acquisition date and the Company's filing of its annual report on Form 10-K for the year ended December 31, 2010, the Company is unable to disclose the information required by ASC 805, Business Combinations. Such information will be included in the Company's subsequent Form 10-Q.

**Table of Contents**

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

**Item 9A. Controls and Procedures**

**(a) Disclosure Controls and Procedures**

The Company is required to maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in its reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including the Company's Chief Executive Officer (CEO) and Chief Financial Officer (CFO) as appropriate, to allow timely decisions regarding required disclosure.

In connection with the preparation of this Form 10-K for the year ended December 31, 2010, management, under the supervision of the CEO and CFO, conducted an evaluation of disclosure controls and procedures. Based on that evaluation, the CEO and CFO concluded that the Company's disclosure controls and procedures were effective as of December 31, 2010.

**(b) Management's Report on Internal Control over Financial Reporting**

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of the Company's financial reporting for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect the Company's transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of the Company's financial statements in accordance with generally accepted accounting principles; providing reasonable assurance that receipts and expenditures of the Company are made in accordance with management and directors of the Company; and providing reasonable assurance that unauthorized acquisition, use or disposition of company assets that could have a material effect on the Company's financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of the Company's financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness of the Company's internal control over financial reporting based on the framework in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2010.

Grant Thornton LLP, the Company's independent registered public accountants, has audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2010, based on the COSO criteria; their report is included in Item 9A.



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**Table of Contents**

**Report of Independent Registered Public Accounting Firm**

Board of Directors and Shareholders

Ligand Pharmaceuticals Incorporated

We have audited Ligand Pharmaceuticals Incorporated's internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Ligand Pharmaceuticals Incorporated's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on Ligand Pharmaceuticals Incorporated's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Ligand Pharmaceuticals Incorporated maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control - Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Ligand Pharmaceuticals Incorporated as of December 2010 and 2009, and the related consolidated statement of operations, stockholders' equity (deficit) and comprehensive loss and cash flows for each of the three years in the period ended December 31, 2010 and our report dated March 3, 2011, expressed an unqualified opinion.

/s/ Grant Thornton LLP

San Diego, California

March 3, 2011

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**Table of Contents**

**Item 9B. Other Information**

On February 15, 2011, the Company issued a press release (the Initial Release ) announcing its financial results for the quarter and year ended December 31, 2010, a copy of which was furnished as Exhibit 99.1 on a Current Report on Form 8-K filed on the same date. Subsequent to the Company's earnings release, the Company agreed to terms with a third party wholesaler for previously recorded liabilities associated with product returns related to the Company's discontinued operations.

As a result of the foregoing, for the quarter ended December 31, 2010, income from discontinued operations increased to approximately \$2.2 million, or \$0.11 per share, from \$13,000, or \$0.00 per share, and total net income increased to approximately \$4.5 million, or \$0.23 per share, from \$2.4 million, or \$0.12 per share. There was no change to income from continuing operations for the quarter ended December 31, 2010. For the year ended December 31, 2010, income from discontinued operations increased to approximately \$2.4 million, or \$0.12 per share, from \$0.3 million, or \$0.01 per share, and total net loss decreased to approximately \$10.4 million, or \$0.53 per share, from \$12.5 million, or \$0.64 per share. There was no change to loss from continuing operations for the year ended December 31, 2010. Additionally, total liabilities decreased to approximately \$72.1 million from \$74.2 million, and stockholders' deficit decreased to approximately \$4.8 million from \$7.0 million.

**Part III**

**Item 10. Directors, Executive Officers and Corporate Governance  
Code of Conduct**

The Board of Directors has adopted a Code of Conduct and Ethics Policy ( Code of Conduct ) that applies to all officers, directors and employees. The Company will promptly disclose any material amendment or waiver to the Code of Conduct which affects any corporate officer. The Code of Conduct was filed with the SEC as an exhibit to our report on Form 10-K for the year ended December 31, 2003, and can be accessed via our website (<http://www.ligand.com>), Corporate Overview page. You may also request a free copy by writing to: Investor Relations, Ligand Pharmaceuticals Incorporated, 11085 North Torrey Pines Road, Suite 300, La Jolla, CA 92037.

The other information under Item 10 is hereby incorporated by reference from Ligand's Definitive Proxy Statement to be filed with the Securities and Exchange Commission on or prior to May 2, 2011. See also the identification of the executive officers following Item 4 of this Annual Report on Form 10-K.

**Item 11. Executive Compensation**

Item 11 is hereby incorporated by reference from Ligand's Definitive Proxy Statement to be filed with the Securities and Exchange Commission on or prior to May 2, 2011.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

Item 12 is hereby incorporated by reference from Ligand's Definitive Proxy Statement to be filed with the Securities and Exchange Commission on or prior to May 2, 2011.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

Item 13 is hereby incorporated by reference from Ligand's Definitive Proxy Statement to be filed with the Securities and Exchange Commission on or prior to May 2, 2011.

**Item 14. Principal Accountant Fees and Services**

Item 14 is hereby incorporated by reference from Ligand's Definitive Proxy Statement to be filed with the Securities and Exchange Commission on or prior to May 2, 2011.



**Table of Contents****PART IV****Item 15. Exhibits and Financial Statement Schedules****(a) The following documents are included as part of this Annual Report on Form 10-K.**

(1) Financial statements

|  |    |
|--|----|
| <u>Index to Consolidated Financial Statements</u>  | 49 |
| <u>Report of Independent Registered Public Accounting Firm</u>                                   | 50 |
| <u>Consolidated Balance Sheets</u>   | 51 |
| <u>Consolidated Statements of Operations</u>   | 52 |
| <u>Consolidated Statements of Stockholders' Equity (Deficit) and Comprehensive Income (Loss)</u> | 53 |
| <u>Consolidated Statements of Cash Flows</u>   | 54 |
| <u>Notes to Consolidated Financial Statements</u>  | 55 |

(2) Schedules not included herein have been omitted because they are not applicable or the required information is in the consolidated financial statements or notes thereto.

(3) The following exhibits are filed as part of this Form 10-K and this list includes the Exhibit Index.

| <b>Exhibit Number</b> | <b>Description</b>   |
|-----------------------|--|
| 2.1(36)               | Agreement and Plan of Merger, dated as of September 24, 2008, by and among Ligand Pharmaceuticals Incorporated, Pharmacoepia, Inc., Margaux Acquisition Corp. and Latour Acquisition, LLC. (Exhibit 2.1).  |
| 2.2(52)               | 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(56)               | 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(56)               | 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(54)               | Amendment No. 3 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).                                     |
| 2.6(53)               | Certificate of Merger for acquisition of Neurogen Corporation (Filed as Exhibit 2.1).  |
| 2.7(57)               | 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(55)               | 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 |
| 2.9(63)               | Certificate of Merger for acquisition of Metabasis Therapeutics, Inc. dated January 27, 2010 (Filed as Exhibit 2.1).   |
| 2.10(68)              | Certificate of Merger, dated and filed January 24, 2011 (Filed as Exhibit 2.1).  |
| 2.11(68)              | 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(1)                | Amended and Restated Certificate of Incorporation of the Company. (Filed as Exhibit 3.2).  |
| 3.2(1)                | Bylaws of the Company, as amended. (Filed as Exhibit 3.3).   |



**Table of Contents**

| <b>Exhibit Number</b> | <b>Description</b>  |
|-----------------------|---|
| 3.3(2)                | Amended Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Company.  |
| 3.4(12)               | Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated June 14, 2000.   |
| 3.5(3)                | Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated September 30, 2004.  |
| 3.6(20)               | Amendment to the Bylaws of the Company dated November 13, 2005. (Filed as Exhibit 3.1).   |
| 3.7(34)               | Amendment of Bylaws of the Company dated December 4, 2007. (Filed as Exhibit 3.1).  |
| 3.8(67)               | Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated November 17, 2010 (Filed as Exhibit 3.1).  |
| 4.1(4)                | Specimen stock certificate for shares of Common Stock of the Company.   |
| 4.2(27)               | 2006 Preferred Shares Rights Agreement, by and between Ligand Pharmaceuticals Incorporated and Mellon Investor Services LLC, dated as of October 13, 2006. (Filed as Exhibit 4.1)   |
| 10.1(4)               | Agreement, dated May 1, 1991, between the Company and Pfizer Inc (with certain confidential portions omitted).  |
| 10.2(4)               | License Agreement, dated January 5, 1990, between the Company and the University of North Carolina at Chapel Hill (with certain confidential portions omitted).   |
| 10.3(4)               | Form of Indemnification Agreement between the Company and each of its directors.  |
| 10.4(4)               | Form of Indemnification Agreement between the Company and each of its officers.   |
| 10.5(4)               | Stock Purchase Agreement, dated September 9, 1992, between the Company and Glaxo, Inc.  |
| 10.6(4)               | Research and Development Agreement, dated September 9, 1992, between the Company and Glaxo, Inc. (with certain confidential portions omitted).  |
| 10.7(8)               | Supplementary Agreement, dated October 1, 1993, between the Company and Pfizer, Inc. to Agreement, dated May 1, 1991.   |
| 10.8(9)               | Option Agreement, dated September 2, 1994, between the Company and American Home Products Corporation, as represented by its Wyeth-Ayerst Research Division (with certain confidential portions omitted). (Filed as Exhibit 10.80). |
| 10.9(5)               | Research, Development and License Agreement, dated December 29, 1994, between SmithKline Beecham Corporation and the Company (with certain confidential portions omitted).  |
| 10.10(10)             | Lease, dated July 6, 1994, between the Company and Chevron/Nexus partnership, First Amendment to lease dated July 6, 1994.  |
| 10.11(11)             | Settlement Agreement and Mutual Release of all Claims, signed April 20, 1996, between the Company and Pfizer, Inc. (with certain confidential portions omitted).  |
| 10.12(6)              | Letter of Agreement dated September 28, 1998 among the Company, Elan Corporation, plc and Elan International Services, Ltd. (with certain confidential portions omitted), (Filed as Exhibit 10.5).                                  |
| 10.13(7)              | Stock Purchase Agreement by and between the Company and Warner-Lambert Company dated September 1, 1999 (with certain confidential portions omitted). (Filed as Exhibit 10.2).   |

**Table of Contents**

| <b>Exhibit<br/>Number</b> | <b>Description</b>   |
|---------------------------|--|
| 10.14(7)                  | License Agreement effective June 30, 1999 by and between the Company and X-Ceptor Therapeutics, Inc. (with certain confidential portions omitted). (Filed as Exhibit 10.7).  |
| 10.15(13)                 | Purchase Agreement, dated March 6, 2002, between the Company and Pharmaceutical Royalties International (Cayman) Ltd.  |
| 10.16(14)                 | Amendment Number 1 to Purchase Agreement, dated July 29, 2002, between the Company and Pharmaceutical Royalties International (Cayman) Ltd.  |
| 10.17(15)                 | Amended and Restated License and Supply Agreement, dated December 6, 2002, between the Company, Elan Corporation, plc and Elan Management Limited (with certain confidential portions omitted).  |
| 10.18(15)                 | Amendment Number 1 to Amended and Restated Registration Rights Agreement, dated November 12, 2002, between the Company and Elan Corporation plc and Elan International Services, Ltd.  |
| 10.19(15)                 | Second Amendment to Purchase Agreement, dated December 19, 2002, between the Company and Pharmaceuticals Royalties International (Cayman) Ltd.   |
| 10.20(15)                 | Amendment Number 3 to Purchase Agreement, dated December 30, 2002, between the Company and Pharmaceuticals Royalties International (Cayman) Ltd. (with certain confidential portions omitted).   |
| 10.21(15)                 | Purchase Agreement, dated December 30, 2002, between the Company and Pharmaceuticals Royalties International (Cayman) Ltd. (with certain confidential portions omitted).   |
| 10.22(16)                 | Co-Promotion Agreement, dated January 1, 2003, by and between the Company and Organon Pharmaceuticals USA Inc. (with certain confidential portions omitted).   |
| 10.23(17)                 | Amendment No. 2 to Amended and Restated Registration Rights Agreement, dated June 25, 2003.  |
| 10.24(18)                 | Option Agreement Between Investors Trust & Custodial Services (Ireland) Ltd., as Trustee for Royalty Pharma, Royalty Pharma Finance Trust and the Company, dated October 1, 2003 (with certain confidential portions omitted).                             |
| 10.25(18)                 | Amendment to Purchase Agreement Between Royalty Pharma Finance Trust and the Company, dated October 1, 2003 (with certain confidential portions omitted).  |
| 10.26(22)                 | 2002 Stock Incentive Plan (as amended and restated through March 9, 2006).   |
| 10.27(18)                 | 2002 Employee Stock Purchase Plan, dated July 1, 2002 (as amended through June 30, 2003).  |
| 10.28(18)                 | Form of Stock Option Agreement.  |
| 10.29(18)                 | Form of Employee Stock Purchase Plan Stock Purchase Agreement.   |
| 10.30(18)                 | Form of Automatic Stock Option Agreement.  |
| 10.31 (18)                | Form of Director Fee Stock Option Agreement.   |
| 10.32(19)                 | Manufacturing and Packaging Agreement, dated February 13, 2004 between Cardinal Health PTS, LLC and the Company (with certain confidential portions omitted).  |
| 10.33(21)                 | Form of Distribution, Storage, Data and Inventory Management Services Agreement.   |
| 10.34(21)                 | Amendment Number 1 to the Option Agreement between Investors Trust & Custodial Services (Ireland) Ltd., solely in its capacity as Trustee for Royalty Pharma, Royalty Pharma Finance Trust and Ligand Pharmaceuticals Incorporated dated November 5, 2004. |

**Table of Contents**

| <b>Exhibit Number</b> | <b>Description</b>  |
|-----------------------|---|
| 10.35(21)             | Amendment to Purchase Agreement between Royalty Pharma Finance Trust, Ligand Pharmaceuticals Incorporated & Investors Trust and Custodial Services (Ireland) Ltd., solely in its capacity as Trustee of Royalty Pharma dated November 5, 2004.  |
| 10.36(22)             | Amended and Restated Research, Development and License Agreement dated as of December 1, 2005 between the Company and Wyeth (formerly American Home Products Corporation) (with certain confidential portions omitted).   |
| 10.37(22)             | Form of Stock Issuance Agreement for non-employee directors.  |
| 10.38(22)             | Form of Amended and Restated Director Fee Stock Option Agreement for 2005 award to Henry Blissenbach, John Groom, Irving Johnson, John Kozarich, Daniel Loeb, Carl Peck, Jeffrey Perry, Brigitte Roberts and Michael Rocca.   |
| 10.39(23)             | Termination and Return of Rights Agreement between Ligand Pharmaceuticals Incorporated and Organon USA Inc. dated as of January 1, 2006   |
| 10.40(24)             | First Amendment to the Manufacturing and Packaging Agreement between Cardinal Health PTS, LLC and Ligand Pharmaceuticals Incorporated (with certain confidential portions omitted).   |
| 10.41(25)             | Purchase Agreement, by and between Ligand Pharmaceuticals Incorporated, King Pharmaceuticals, Inc. and King Pharmaceuticals Research and Development, Inc., dated as of September 6, 2006.  |
| 10.42(26)             | Contract Sales Force Agreement, by and between Ligand Pharmaceuticals Incorporated and King Pharmaceuticals, Inc. dated as of September 6, 2006.  |
| 10.43(25)             | Purchase Agreement, by and among Ligand Pharmaceuticals Incorporated, Seragen, Inc., Eisai Inc. and Eisai Co., Ltd., dated as of September 7, 2006.   |
| 10.44(31)             | Stipulation of Settlement by and among Plaintiffs and Ligand Pharmaceuticals, Inc. et al., <u>In re Ligand Pharmaceuticals Inc. Securities Litigation</u> , United States District Court, District of Southern California, dated as of June 28, 2006, approved by Order dated October 16, 2006. |
| 10.45(31)             | Stipulation of Settlement by and among Plaintiffs and Ligand Pharmaceuticals, Inc. et al., <u>In re Ligand Pharmaceuticals Inc. Derivative Litigation</u> , Superior Court of California, County of San Diego, dated as of September 19, 2006, approved by Order dated October 12, 2006.        |
| 10.46(31)             | Loan Agreement by and between Ligand Pharmaceuticals Incorporated and King Pharmaceuticals, 303 Inc. dated as of October 12, 2006.  |
| 10.47(29)             | Letter Agreement by and between Ligand and King Pharmaceuticals, Inc. effective as of December 29, 2006.  |
| 10.48(29)             | Amendment Number 1 to Purchase Agreement, Contract Sales Force Agreement and Confidentiality Agreement by and between Ligand and King Pharmaceuticals, Inc. effective as of November 30, 2006.  |
| 10.49(28)             | Purchase Agreement and Escrow Instructions by and between Nexus Equity VI, LLC, a California Limited Liability Company, and Ligand Pharmaceuticals Incorporated, a Delaware Corporation and Slough Estates USA Inc., a Delaware corporation dated October 25, 2006.                             |
| 10.50(31)             | 2006 Employee Severance Plan dated as of October 4, 2006.   |
| 10.51(31)             | Form of Letter Agreement regarding Change of Control Severance Benefits between the Company and its officers.   |



**Table of Contents**

| <b>Exhibit Number</b> | <b>Description</b>   |
|-----------------------|--|
| 10.52(29)             | Letter Agreement by and between the Company and John L. Higgins dated as of January 10, 2007.  |
| 10.53(30)             | Amendment Number 2 to Purchase Agreement, by and between the Company and King Pharmaceuticals, Inc. effective as of February 26, 2007.   |
| 10.54(32)             | Letter Agreement by and between the Company and John P. Sharp dated as of March 30, 2007. (Filed as Exhibit 10.1).   |
| 10.55(33)             | Form of Executive Officer Change in Control Severance Agreement. (Filed as Exhibit 10.1).  |
| 10.56(35)             | Sublease Agreement between the Company and eBIOSCIENCE, INC., effective as of December 13, 2007. (Filed as Exhibit 10.1).  |
| 10.57(37)             | Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under the Company's 2002 Stock Incentive Plan. (Filed as Exhibit 10.318).   |
| 10.58(37)             | Form of Amendment to Restricted Stock Agreement for executive officers other than Chief Executive Officer. (Filed as Exhibit 10.319).  |
| 10.59(37)             | Amendment to Restricted Stock Agreement between the Company and John L. Higgins. (Filed as Exhibit 10.320).  |
| 10.60(47)             | Collaboration and License Agreement, dated as of July 9, 2003 and effective August 8, 2003, between Pharmacoepia, Inc. and Schering-Plough Ltd. (with certain confidential portions omitted).  |
| 10.61(47)             | Collaboration and License Agreement, dated as of July 9, 2003 and effective August 8, 2003, between Pharmacoepia, Inc. and Schering Corporation (with certain confidential portions omitted).  |
| 10.62(39)             | Amendment No. 1, dated July 27, 2006, to the Collaboration and License Agreements, effective as of July 9, 2003, between (i) Pharmacoepia, Inc. and Schering Corporation and (ii) Pharmacoepia, Inc. and Schering-Plough Ltd. (Filed as Exhibit 10.1). |
| 10.63(47)             | Lease, dated August 20, 2003, between Pharmacoepia, Inc. and Eastpark at 8A (Building 1000).   |
| 10.64(40)             | Amendment to Lease, dated September 10, 2007, between Eastpark at 8A and Pharmacoepia, Inc. (Building 1000). (Filed as Exhibit 10.1).  |
| 10.65(47)             | Lease, dated August 20, 2003, between Pharmacoepia, Inc. and Eastpark at 8A (Building 3000).   |
| 10.66(40)             | Amendment to Lease, dated April 18, 2007, between Eastpark at 8A and Pharmacoepia, Inc. (Building 3000). (Filed as Exhibit 10.2).  |
| 10.67 (41)            | License Agreement, dated as of March 27, 2006, between Pharmacoepia, Inc. and Bristol-Myers Squibb Company (Filed as Exhibit 10.2).  |
| 10.68(42)             | Collaboration and License Agreement between Pharmacoepia, Inc. and Cephalon, Inc., dated May 18, 2006. (Filed as Exhibit 10.1).  |
| 10.69(43)             | License Agreement, amended and restated as of July 1, 2003, among The Trustees of Columbia University in the City of New York, Cold Spring Harbor Laboratory and Pharmacoepia, Inc. (Filed as Exhibit 10.2).   |
| 10.70(44)             | Collaboration and License Agreement, amended and restated effective as of February 8, 2007, between Pharmacoepia, Inc. and N.V. Organon. (Filed as Exhibit 10.1).  |

**Table of Contents**

| <b>Exhibit Number</b> | <b>Description</b>   |
|-----------------------|--|
| 10.71(45)             | License Agreement, dated October 11, 2007, between Bristol-Myers Squibb Company and Pharmacoepia, Inc. (Filed as Exhibit 10.45).   |
| 10.72(38)             | Contingent Value Rights Agreement, dated December 23, 2008, among the Company, Pharmacoepia, Inc. and Mellon Investor Services LLC. (Filed as Exhibit 10.1).   |
| 10.73(37)             | Amended and Restated Severance Plan, dated December 20, 2008, of the Company. (Filed as Exhibit 10.2).   |
| 10.74(46)             | Settlement Agreement and Mutual Release of all Claims, by and between the Company and The Salk Institute for Biological Studies, dated as of September 2, 2008 (Filed as Exhibit 10.316).                        |
| 10.75(47)             | License Agreement, dated of December 17, 2008, between the Company and SmithKline Beecham Corporation, doing business as GlaxoSmithKline (with certain confidential portions omitted) (Filed as Exhibit 10.346). |
| 10.76(48)             | Settlement Agreement and Mutual Release, by and between the Company and The Rockefeller University, dated as of February 11, 2009 (Filed as Exhibit 10.318).   |
| 10.77(49)             | Exclusive Patent License Agreement, by and between Glycomed, Inc., a wholly owned subsidiary of the Company and ParinGenix Inc, dated as of June 18, 2009 (Filed as Exhibit 10.321).                             |
| 10.78(49)             | Amended and Restated Director Compensation and Stock Ownership Policy, effective as of April 16, 2009 (Filed as Exhibit 10.322).   |
| 10.79(50)             | Research Collaboration Termination Agreement, between the Company and N.V. Organon, dated as of July 29, 2009 (Filed as Exhibit 10.323).   |
| 10.80(51)             | Lease, between the Company and HCP TPSP, LLC, dated August 7, 2009 (Filed as Exhibit 10.321).  |
| 10.81(51)             | Lease Termination Agreement, between the Company and TPSC IX, LLC, dated August 7, 2009 (Filed as Exhibit 10.322).   |
| 10.82(53)             | H3 Contingent Value Rights Agreement (Filed as Exhibit 10.3).  |
| 10.83(53)             | Merck Contingent Value Rights Agreement (Filed as Exhibit 10.4).   |
| 10.84(58)             | Collaborative Research Agreement and License and Royalty Agreement between Neurogen Corporation and Pfizer Inc, dated as of January 1, 1992 (Filed as Exhibit 10.35) (File No. 000-18311).                       |
| 10.85 (59)            | Collaborative Research Agreement and License and Royalty Agreement between Neurogen Corporation and Pfizer Inc, dated as of July 1, 1994 (Filed as Exhibit 10.1) (File No. 000-18311).                           |
| 10.86(60)             | Collaboration and License Agreement and Screening Agreement between Neurogen Corporation and Schering-Plough Corporation (Filed as Exhibit 10.1) (File No. 000-18311).   |
| 10.87(61)             | Collaborative Research Agreement between Neurogen Corporation and Pfizer dated as of November 1, 1995 (Filed as Exhibit 10.1) (File No. 000-18311).  |
| 10.88(61)             | Development and Commercialization Agreement between Neurogen Corporation and Pfizer dated as of November 1, 1995 (Filed as Exhibit 10.2) (File No. 000-18311).   |
| 10.89(62)             | Collaboration and License Agreement dated as of November 24, 2003 between Neurogen Corporation and Merck Sharp & Dohme Limited (Filed as Exhibit 10.43) (File No. 000-18311).                                    |

**Table of Contents**

| <b>Exhibit<br/>Number</b> | <b>Description</b>  |
|---------------------------|---|
| 10.90(62)                 | Stock Purchase Agreement dated as of November 24, 2003 between Neurogen Corporation and Merck Sharp & Dohme Limited (Filed as Exhibit 10.43) (File No. 000-18311).  |
| 10.91(63)                 | TR Beta Contingent Value Rights Agreement, dated January 27, 2010, among the Company, Metabasis Therapeutics, Inc., David F. Hale and Mellon Investor Services LLC. (Filed as Exhibit 10.2).  |
| 10.92(63)                 | Glucagon Contingent Value Rights Agreement, dated January 27, 2010, among the Company, Metabasis Therapeutics, Inc., David F. Hale and Mellon Investor Services LLC. (Filed as Exhibit 10.3).   |
| 10.93(63)                 | General Contingent Value Rights Agreement, dated January 27, 2010, among the Company, Metabasis Therapeutics, Inc., David F. Hale and Mellon Investor Services LLC. (Filed as Exhibit 10.4).  |
| 10.94(69)                 | Amendment of General Contingent Value Rights Agreement, dated January 26, 2011 [original agreement was dated January 27, 2010] (filed as Exhibit 10.1).   |
| 10.95(64)                 | Purchase and Sale Agreement, dated May 18, 2010, between the Company and The Genaera Liquidating Trust (Filed as Exhibit 10.1).   |
| 10.96(65)                 | Purchase Agreement, dated May 20, 2010, between the Company and Biotechnology Value Fund, L.P., on its own behalf and on behalf of Biotechnology Valude Fund II, L.P. and Investment 10, L.L.C. (Filed as Exhibit 10.1).                    |
| 10.97(66)                 | Asset Purchase Agreement, dated as of July 30, 2010, between Wyeth LLC, Pharmacopeia, Inc. and the Company (Filed as Exhibit 10.1).   |
| 10.98(68)                 | Contingent Value Rights Agreement, by and among the Company, CyDex Pharmaceuticals, Inc., and Allen K. Roberson and David Poltack, acting jointly as Shareholders Representative, dated January 14, 2011 (Filed as Exhibit 10.2).           |
| 10.99(68)                 | Loan and Security Agreement, by and among the Company, its subsidiaries and Oxford Finance Corporation, dated January 24, 2011 (Filed as Exhibit 10.3).   |
| 10.100                    | Captisol Supply Agreement, dated December 20, 2002, between CyDex and Hovione LLC, Hovione FarmaCiencia S.A., Hovione Pharmascience Limited, and Hovione International Limited (with certain confidential portions omitted)                 |
| 10.101                    | 1st Amendment to Captisol Supply Agreement, dated July 29, 2005, between CyDex and Hovione LLC, Hovione FarmaCiencia S.A., Hovione Pharmascience Limited, and Hovione International Limited (with certain confidential portions omitted)    |
| 10.102                    | 2nd Amendment to Captisol Supply Agreement dated March 1, 2007, between CyDex and Hovione LLC, Hovione FarmaCiencia S.A., Hovione Pharmascience Limited, and Hovione International Limited  |
| 10.103                    | 3rd Amendment to Captisol Supply Agreement dated January 28, 2008, between CyDex and Hovione LLC, Hovione FarmaCiencia S.A., Hovione Pharmascience Limited, and Hovione International Limited (with certain confidential portions omitted)  |
| 10.104                    | 4th Amendment to Captisol Supply Agreement dated September 23, 2009 between CyDex and Hovione LLC, Hovione FarmaCiencia S.A., Hovione Pharmascience Limited, and Hovione International Limited (with certain confidential portions omitted) |

**Table of Contents**

| <b>Exhibit Number</b> | <b>Description</b>  |
|-----------------------|---|
| 10.105                | License Agreement, dated September 3, 1993, between CyDex and The University of Kansas (with certain confidential portions omitted)   |
| 10.106                | First Amendment to License Agreement, dated February 24, 1998, between CyDex and The University of Kansas (with certain confidential portions omitted)                          |
| 10.107                | Second Amendment to License Agreement, dated August 4, 2004, between CyDex and The University of Kansas (with certain confidential portions omitted)                            |
| 10.108                | Exclusive License Agreement, dated June 4, 1996, between Pfizer, Inc. and CyDex (with certain confidential portions omitted)  |
| 10.109                | Nonexclusive License Agreement, dated June 4, 1996, between Pfizer, Inc. and CyDex (with certain confidential portions omitted)   |
| 10.110                | Addendum to Nonexclusive License Agreement, dated December 11, 2001, between CyDex and Pfizer, Inc. (with certain confidential portions omitted)                                |
| 10.111                | Acknowledgement Agreement, dated March 3, 2008, between CyDex and The University of Kansas (with certain confidential portions omitted)   |
| 10.112                | License Agreement, dated January 4, 2006, between CyDex and Prism Pharmaceuticals (with certain confidential portions omitted)  |
| 10.113                | Amendment to License Agreement, dated May 12, 2006 between CyDex and Prism Pharmaceuticals (with certain confidential portions omitted)   |
| 10.114                | Supply Agreement, dated March 5, 2007, between CyDex and Prism Pharmaceuticals (with certain confidential portions omitted)   |
| 10.115(70)            | License and Supply Agreement, dated October 12, 2005 between CyDex and Proteolix, Inc. (with certain confidential portions omitted)(Filed as Exhibit 10.22)(File No. 000-28298) |
| 14.1(18)              | Code of Business Conduct and Ethics.  |
| 21.1                  | Subsidiaries of Registrant.   |
| 23.1                  | Consent of independent registered public accounting firm-Grant Thornton LLP   |
| 24.1                  | Power of Attorney (See page 105).   |
| 31.1                  | Certification by Principal Executive Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.                  |
| 31.2                  | Certification by Principal Financial Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.                  |
| 32.1                  | 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.                         |

- (1) 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.
- (2) 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.
- (3) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2004.
- (4) 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.



**Table of Contents**

- (5) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Registration Statement on Form S-1/S-3 (No. 33-87598 and 33-87600) filed on December 20, 1994, as amended.
- (6) 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 September 30, 1998.
- (7) 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 September 30, 1999.
- (8) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 1993.
- (9) 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 September 30, 1994.
- (10) This exhibit was previously filed, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 1995.
- (11) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly report on Form 10-Q for the period ended June 30, 1996.
- (12) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same 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 same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2002.
- (14) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2002.
- (15) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2002.
- (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 Quarterly Report on Form 10-Q for the period ended March 31, 2003.
- (17) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2003.
- (18) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2003.
- (19) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2004.
- (20) 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 14, 2005.
- (21) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2004.
- (22) 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. 333-131029) filed on January 13, 2006 as amended.
- (23) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with an Amendment to the Company's Registration Statement on Form S-1 (No. 333-1031029) filed on February 10, 2006.
- (24) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2006.
- (25) 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 Form 8-K filed on September 11, 2006.

**Table of Contents**

- (26) 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 Form 8-K filed on September 12, 2006.
- (27) 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 Form 8-K filed on October 17, 2006.
- (28) 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 October 31, 2006.
- (29) 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 5, 2007.
- (30) 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 February 28, 2007.
- (31) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2006.
- (32) 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 May 4, 2007.
- (33) 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 22, 2007.
- (34) 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.
- (35) 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 19, 2007.
- (36) 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.
- (37) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the period ended December 31, 2007.
- (38) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Pharmacopeia, Inc.'s Current Report on Form 8-K filed on May 3, 2004.
- (39) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Pharmacopeia, Inc.'s Current Report on Form 8-K filed on August 2, 2006.
- (40) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Quarterly Report on Form 10-Q for the period ended September 30, 2007.
- (41) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Quarterly Report on Form 10-Q for the period ended March 31, 2006.
- (42) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Quarterly Report on Form 10-Q for the period ended June 30, 2006.
- (43) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Quarterly Report on Form 10-Q for the period ended June 30, 2005.
- (44) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Quarterly Report on Form 10-Q for the period ended March 31, 2007.
- (45) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.
- (46) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Pharmacopeia, Inc.'s Quarterly Report on Form 10-Q for the period ended September 30, 2008.
- (47) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the period ended December 31, 2008.

**Table of Contents**

- (48) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2009.
- (49) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2009.
- (50) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2009.
- (51) 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 11, 2009.
- (52) 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.
- (53) 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.
- (54) 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 17, 2009.
- (55) 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 1, 2009.
- (56) 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.
- (57) 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 October 28, 2009.
- (58) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with Neurogen Corporation's Annual Report on Form 10-K for the period ended December 31, 1991.
- (59) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with Neurogen Corporation's Quarterly Report on Form 10-Q for the period ended June 30, 1994.
- (60) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with Neurogen Corporation's Current Report on Form 8-K filed on July 28, 1995.
- (61) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with Neurogen Corporation's Current Report on Form 8-K filed on November 1, 1995.
- (62) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with Neurogen Corporation's Annual Report on Form 10-K for the period ended December 31, 2003.
- (63) 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.
- (64) 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 May 24, 2010.
- (65) 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, 2010.
- (66) 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 September 30, 2010.
- (67) 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 19, 2010.
- (68) 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.
- (69) 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 31, 2011.
- (70) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with Onyx Pharmaceuticals, Inc.'s Annual Report on Form 10-K for the period ended December 31, 2009.



**Table of Contents****(4)(d) Financial Statement Schedule**

Schedules not included herein have been omitted because they are not applicable or the required information is in the consolidated financial statements or notes thereto.

**Schedule II Valuation and Qualifying Accounts (in thousands)**

|  | <b>Balance at<br/>Beginning of<br/>Period</b> | <b>Charges</b> | <b>Deductions</b> | <b>Other</b> | <b>Balance at<br/>End of<br/>Period</b> |
|--|---|----------------|-------------------|--------------|---|
| December 31, 2010:                                 |   |                |                   |              |   |
| Allowance for doubtful accounts and cash discounts | \$ 200  | \$             | \$                | \$           | \$ 200                                  |
| December 31, 2009:                                 |   |                |                   |              |   |
| Allowance for doubtful accounts and cash discounts | \$ 200  | \$             | \$                | \$           | \$ 200                                  |
| December 31, 2008:                                 |   |                |                   |              |   |
| Allowance for doubtful accounts and cash discounts | \$ 200  | \$             | \$                | \$           | \$ 200                                  |

**Table of Contents****SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) 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.

LIGAND PHARMACEUTICALS INCORPORATED

By: */s/* JOHN L. HIGGINS  
**John L. Higgins,**  
**President and Chief Executive Officer**

Date: March 2, 2011

**POWER OF ATTORNEY**

Know all men by these presents, that each person whose signature appears below constitutes and appoints John L. Higgins or John P. Sharp, his or her attorney-in-fact, with power of substitution in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that the attorney-in-fact or his or her substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| <b>Signature</b>   | <b>Title</b>   | <b>Date</b>   |
|--|--|---------------|
| <i>/s/</i> JOHN L. HIGGINS<br><b>John L. Higgins</b>     | President, Chief Executive Officer and Director<br>(Principal Executive Officer)                       | March 2, 2011 |
| <i>/s/</i> JOHN P. SHARP<br><b>John P. Sharp</b>         | Vice President, Finance and Chief Financial<br>Officer (Principal Financial and Accounting<br>Officer) | March 2, 2011 |
| <i>/s/</i> JASON M. ARYEH<br><b>Jason M. Aryeh</b>       | Director   | March 2, 2011 |
| <i>/s/</i> TODD C. DAVIS<br><b>Todd C. Davis</b>         | Director   | March 2, 2011 |
| <i>/s/</i> DAVID M. KNOTT<br><b>David M. Knott</b>       | Director   | March 2, 2011 |
| <i>/s/</i> JOHN W. KOZARICH<br><b>John W. Kozarich</b>   | Director   | March 2, 2011 |
| <i>/s/</i> JOHN L. LAMATTINA<br><b>John L. LaMattina</b> | Director   | March 2, 2011 |

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/s/ SUNIL PATEL

Director

March 2, 2011

**Sunil Patel**

/s/ STEPHEN L. SABBA

Director

March 2, 2011

**Stephen L. Sabba**

105