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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	**77-0160744**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**
11085 North Torrey Pines Rd., Suite 300 La Jolla, CA	**92037**
(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.

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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. You may also request information via the Investor Relations page of our website.

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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

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.

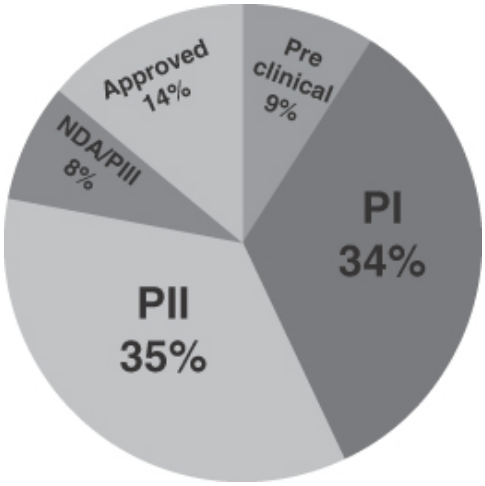
We are assembling a large portfolio of fully funded programs through acquisition and licensing to drive future profitability. We have assembled a portfolio of over fifty fully-funded partner programs that are in all stages of development, from awaiting commercialization to preclinical research. These 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 pharmicokinetics 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.



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-spenectomized 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.

Promacta Royalty*	
Rate	**Tier**
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

AVINZA (Pfizer)

We currently receive royalty revenues from King Pharmaceuticalsfor 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 VIVIANT® (bazedoxifene) in Japan for the treatment of postmenopausal osteoporosis. The drug is also marketed in Spain under the brand name CONBRIZA® 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. VIVIANT 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. VIVIANT, 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®, 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® I.V. for Injection (antifungal), Geodon® 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

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®, an injectable formulation combining amiodarone and Captisol®, 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

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.

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 IV	Oncology	Phase II
Captisol-Enabled Topiramate IV	Epilepsy/Seizures	Preclinical
Glucagon receptor antagonists	Diabetes	Preclinical

Selective Androgen Receptor Modulators (SARM) Research and Development Programs

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. SARM's 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.

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 Captiol-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)

- 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

- 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 hepatitic 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.

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

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 PMEA, 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.

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,

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

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.

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.

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

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.

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;

- 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

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 Pharmacopeia, LLC, as successor to Pharmacopeia Drug Discovery, Inc. The termination became effective on October 7, 2010. Absent the termination by GSK, the research term under this agreement would have terminated on March 24, 2011. Following termination, we retained rights to the current programs under this agreement and may continue to develop the programs and commercialize any products resulting from the programs, or we may elect to cease progressing the programs and/or seek other partners for further development and commercialization.

In 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.

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 expcted 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

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

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.

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.

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, VIVIANT and CONBRIZA royalties and royalties and milestones from our partners in various past and future collaborations to the extent possible, if we are unable to do so, we may need to complete additional equity or debt financings or seek other external means of financing. These financings could depress our stock price. If additional funds are required to support our operations and we are unable to obtain them on terms favorable to us, we may be required to cease or reduce further development or commercialization of our products, to sell some or all of our technology or assets or to merge with another entity.

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.

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.

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

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

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

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

In addition, we will likely experience significant charges to earnings in connection with our efforts, if any, to consummate acquisitions. For transactions that are ultimately not consummated, these charges may include

fees and expenses for investment bankers, attorneys, accountants and other advisors in connection with our efforts. Even if our efforts are successful, we may incur, as part of a transaction, substantial charges for closure costs associated with elimination of duplicate operations and facilities and acquired IPR&D charges. In either case, the incurrence of these charges could adversely affect our results of operations for particular quarterly or annual periods.

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.

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

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 affect 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
Year Ended December 31, 2010:		
1st Quarter	$13.80	$ 9.30
2nd Quarter	11.64	8.22
3rd Quarter	10.32	8.28
4th Quarter	14.80	8.14
Year Ended December 31, 2009:		
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.

Holders

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			

(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.

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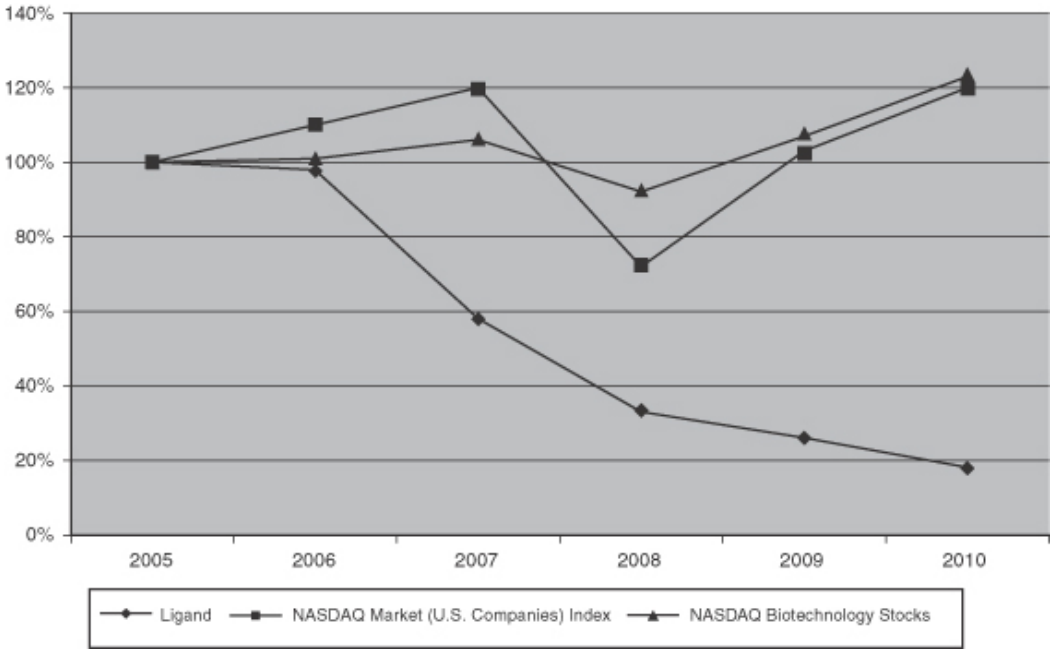
Performance Graph

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%

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.

	Year Ended December 31,				
	2010	2009	2008	2007	2006(2)
	(in thousands, except share data)				
Consolidated Statement of Operations Data:					
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

	December 31,				
	2010	2009	2008	2007	2006
			(in thousands)		
Consolidated Balance Sheet Data:					
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.

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.

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.

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 Pharmacopeia 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.

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
Total research	19,547	34,157	21,626
Development costs	2,520	5,713	9,144
Total research and development	$22,067	$39,870	$30,770

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.

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 Pharmacopeia 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

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 inprocess 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 Pharmacopeia, 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.

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.

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.

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, VIVIANT, 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

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 Pharmacopeia. 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 Pharmacopeia 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.

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 Pharmacopeia on December 23, 2008, Pharmacopeia 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.

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, VIVIANT, 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.

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

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.

Item 8. Consolidated Financial Statements and Supplementary Data

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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

LIGAND PHARMACEUTICALS INCORPORATED

CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	December 31, 2010	December 31, 2009
ASSETS		
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
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
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
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.

LIGAND PHARMACEUTICALS INCORPORATED

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share data)

	Year Ended December 31,		
	2010	2009	2008
Revenues:			
Royalties	$ 7,279	$ 8,334	$ 20,315
Collaborative research and development and other revenues	16,259	30,606	7,000
Total revenues	23,538	38,940	27,315
Operating costs and expenses:			
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
Total operating costs and expenses	54,544	70,758	126,555
Accretion of deferred gain on sale leaseback	1,702	21,851	1,964
Loss from operations	(29,304)	(9,967)	(97,276)
Other income (expense):			
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)
Total other income (expense), net	13,901	95	(239)
Loss from continuing operations before income tax benefit	(15,403)	(9,872)	(97,515)
Income tax benefit (expense) from continuing operations	2,617	1,535	55
Loss from continuing operations	(12,786)	(8,337)	(97,460)
Discontinued operations:			
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
Income (loss) from discontinued operations	2,413	6,389	(654)
Net income (loss)	$ (10,373)	$ (1,948)	$ (98,114)
Basic and diluted per share amounts:			
Loss from continuing operations	$ (0.65)	$ (0.44)	$ (6.12)
Income (loss) from discontinued operations	0.12	0.34	(0.04)
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.

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LIGAND PHARMACEUTICALS INCORPORATED

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS)
(in thousands, except share data)

	Common stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Accumulated deficit	Treasury stock		Total stockholders' equity (deficit)	Comprehensive income (loss)
	Shares	Amount				Shares	Amount		
Balance at December 31, 2007	16,757,228	$ 17	$651,141	$ 9	$ (581,512)	(1,043,858)	$(40,521)	$ 29,115	
Issuance of common stock under employee stock compensation plans	3,723	—	130	—	—	—	—	130	
Repurchase of common stock	—	—	—	—	—	(57,459)	(1,613)	(1,613)	
Unrealized net gain on available-for-sale securities	—	—	—	72	—	—	—	72	$ 72
Stock-based compensation	—	—	3,607	—	—	—	—	3,607	
Issuance of common stock for acquisition of Pharmacopeia.	2,999,506	3	56,420	—	—	—	—	56,438	
Net loss	—	—	—	—	(98,114)	—	—	(98,114)	(98,114)
Balance at December 31, 2008	19,760,457	20	711,298	81	(679,626)	(1,101,317)	(42,134)	(10,365)	$ (98,042)
Issuance of common stock under employee stock compensation plans	84,376	—	228	—	—	—	—	228	
Unrealized net gain on available-for-sale securities	—	—	—	432	—	—	—	432	$ 432
Stock-based compensation	—	—	3,365	—	—	—	—	3,365	
Shares redeemed in lieu of cash payment for milestone achieved.	—	—	3,086	—	—	—	—	3,086	
Issuance of common stock for acquisition of Neurogen.	700,000	1	8,942	—	—	—	—	8,946	
Net loss	—	—	—	—	(1,948)	—	—	(1,948)	(1,948)
Balance at December 31, 2009	20,544,833	21	726,919	513	(681,574)	(1,101,317)	(42,134)	3,744	(1,516)
Issuance of common stock under employee stock compensation plans	76,084	—	27	—	—	—	—	27	
Unrealized net gain (loss) on available-for-sale securities	—	—	—	(482)	—	—	—	(482)	$ (482)
Repurchase of common stock	—	—	—	—	—	(10,682)	(91)	(91)	
Stock-based compensation	—	—	2,325	—	—	—	—	2,325	
Net loss	—	—	—	—	(10,373)	—	—	(10,373)	(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

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

	Year Ended December 31,		
	2010	2009	2008
Operating activities			
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)
Investing activities			
Cash paid for acquisition of Metabasis	(2,834)	—	—
Cash acquired from acquisition of Pharmacopeia	—	—	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)
Financing activities			
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)
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
Supplemental disclosure of cash flow information			
Interest paid	$ 58	$ 270	$ 229
Taxes paid	28	14	140
Proceeds received from sale of building and disbursed to Neurogen shareholders	3,170	—	—
Supplemental schedule of non-cash investing and financing activities			
Issuance of common stock for acquisition	—	8,946	56,438

See accompanying notes to these consolidated financial statements.

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"), Pharmacopeia, 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, VIVIANT, 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,

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):

	December 31,	
	2010	2009
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

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):

	December 31,	
	2010	2009
Acquired in-process research and development	$12,251	$1,815
Goodwill	700	700
	$12,951	$2,515

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

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 Pharmacopeia, 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 Pharmacopeia, 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 Pharmacopeia, Inc. As a result of subsequent adjustments to the purchase price allocation related to the acquisition of Pharmacopeia, 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

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 Pharmacopeia in December 2008, the Company issued to Pharmacopeia 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 Pharmacopeia'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.

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):

	Fair Value Measurements at Reporting Date Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Fixed income available-for-sale securities	$19,351	$ 19,351	$ —	$ —
Liabilities:				
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):

	Fair Value Measurements at Reporting Date Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Fixed income available-for-sale securities	$37,200	$ 35,305	$ 1,895	$ —
Liabilities:				
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.

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.

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

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.

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

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
Total purchase consideration	$10,900

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)
	$10,900

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.

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):

Purchase Consideration:	
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
Total purchase consideration	$13,416
Allocation of Purchase Price:	
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)
	$13,416

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

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 Pharmacopeia

On December 23, 2008, the Company completed the acquisition of Pharmacopeia, 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 Pharmacopeia 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 Pharmacopeia stockholders, or 0.0998 shares for each outstanding Pharmacopeia 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, Pharmacopeia 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 Pharmacopeia'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 Pharmacopeia's operations have been included in the consolidated financial statements commencing December 23, 2008.

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

Purchase Consideration: **(in thousands)**	
Fair value of common stock issued to Pharmacopeia shareholders	$56,439
Cash paid to Pharmacopeia shareholders	9,337
Transaction costs	4,344
Total purchase consideration	$70,120

Allocation of Purchase Price: **(in thousands)**	
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)
	$ 70,120

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

Acquired Intangible Assets **(in thousands)**	
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 Pharmacopeia 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

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

(in thousands, except per share data)	2008
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 Pharmacopeia.

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

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

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 unrealized gains	Gross unrealized losses	Estimated fair value
December 31, 2010				
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
December 31, 2009				
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

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):

	December 31,	
	2010	2009
Prepaid expenses	$578	$ 848
Other receivables	142	516
	$720	$1,364

Accrued liabilities consist of the following (in thousands):

	December 31,	
	2010	2009
Warrant liability	$ —	$ 459
Compensation	2,201	2,808
Legal	330	134
Lease exit obligations	2,076	61
Other	6,252	6,035
	$8,859	$9,497

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

	Charge-backs and Rebates	Returns	Total
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)
Charges	—	(17)	(17)
Balance at December 31, 2010	$ —	$ —	$ —

(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):

	December 31,	
	2010	2009
Liability for contingent value rights	$ 700	$ 700
Deferred rent	601	1,165
Deposits	388	388
Litigation payment	—	1,000
	$1,689	$3,253

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).

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)
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)
Long-term portion of co-promote termination liability as of December 31, 2009	30,993
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)
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)
Long-term portion of co-promote termination liability as of December 31, 2010	$22,851

10. Warrant Liability

In connection with the acquisition of Pharmacopeia, 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 Pharmacopeia'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

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.

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.

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,

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 Average Exercise Price	Weighted-Average Remaining Contractual Term in Years	Aggregate Intrinsic Value (In 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
Options expected to vest as of December 31, 2010	641,261	21.36	7.00	9

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:

	Options Outstanding			Options exercisable	
Range of exercise prices	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.

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.

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

Bristol-Myers Squibb Collaborations

In connection with the acquisition of Pharmacopeia, 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 Pharmacopeia, the Company assumed a product development and commercialization agreement which Pharmacopeia 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.

Pharmacopeia 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

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 Pharmacopeia, 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 Pharmacopeia'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, Pharmacopeia 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 (formerlySchering-Plough Collaboration)

2007 Collaboration

In connection with the completion of the Company's acquisition of Pharmacopeia, 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, Pharmacopeia 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

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
Current Benefit:			
Federal	$ 27,685	$(23,533)	$ 27
State	—	—	—
Foreign	—	—	28
	27,685	(23,533)	55
Deferred Benefit:			
Federal	(25,068)	25,068	—
State	—	—	—
Foreign	—	—	—
	$ 2,617	$ 1,535	$ 55

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.

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.

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
2010				
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

	Quarter ended			
	March 31	June 30	September 30	December 31
2009				
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.

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 it 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.

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.

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

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.

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

(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.

Exhibit Number	Description
2.1(36)	Agreement and Plan of Merger, dated as of September 24, 2008, by and among Ligand Pharmaceuticals Incorporated, Pharmacopeia, 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).

Exhibit Number	Description
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).

Exhibit Number	Description
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.

Exhibit Number	Description
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, Brigette 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., In re Ligand Pharmaceuticals Inc. Securities Litigation, 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., In re Ligand Pharmaceuticals Inc. Derivative Litigation, 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.

Exhibit Number	Description
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 Pharmacopeia, 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 Pharmacopeia, 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) Pharmacopeia, Inc. and Schering Corporation and (ii) Pharmacopeia, Inc. and Schering-Plough Ltd. (Filed as Exhibit 10.1).
10.63(47)	Lease, dated August 20, 2003, between Pharmacopeia, Inc. and Eastpark at 8A (Building 1000).
10.64(40)	Amendment to Lease, dated September 10, 2007, between Eastpark at 8A and Pharmacopeia, Inc. (Building 1000). (Filed as Exhibit 10.1).
10.65(47)	Lease, dated August 20, 2003, between Pharmacopeia, Inc. and Eastpark at 8A (Building 3000).
10.66(40)	Amendment to Lease, dated April 18, 2007, between Eastpark at 8A and Pharmacopeia, Inc. (Building 3000). (Filed as Exhibit 10.2).
10.67 (41)	License Agreement, dated as of March 27, 2006, between Pharmacopeia, Inc. and Bristol-Myers Squibb Company (Filed as Exhibit 10.2).
10.68(42)	Collaboration and License Agreement between Pharmacopeia, 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 Pharmacopeia, Inc. (Filed as Exhibit 10.2).
10.70(44)	Collaboration and License Agreement, amended and restated effective as of February 8, 2007, between Pharmacopeia, Inc. and N.V. Organon. (Filed as Exhibit 10.1).

Exhibit Number	Description
10.71(45)	License Agreement, dated October 11, 2007, between Bristol-Myers Squibb Company and Pharmacopeia, Inc. (Filed as Exhibit 10.45).
10.72(38)	Contingent Value Rights Agreement, dated December 23, 2008, among the Company, Pharmacopeia, 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).

Exhibit Number	Description
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)

Exhibit Number	Description
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.

(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.

(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.

(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.

(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)

	Balance at Beginning of Period	Charges	Deductions	Other	Balance at End of Period
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

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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.

Signature	Title	Date
/S/ JOHN L. HIGGINS **John L. Higgins**	President, Chief Executive Officer and Director (Principal Executive Officer)	March 2, 2011
/S/ JOHN P. SHARP **John P. Sharp**	Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 2, 2011
/S/ JASON M. ARYEH **Jason M. Aryeh**	Director	March 2, 2011
/S/ TODD C. DAVIS **Todd C. Davis**	Director	March 2, 2011
/S/ DAVID M. KNOTT **David M. Knott**	Director	March 2, 2011
/S/ JOHN W. KOZARICH **John W. Kozarich**	Director	March 2, 2011
/S/ JOHN L. LAMATTINA **John L. LaMattina**	Director	March 2, 2011
/S/ SUNIL PATEL **Sunil Patel**	Director	March 2, 2011
/S/ STEPHEN L. SABBA **Stephen L. Sabba**	Director	March 2, 2011

Exhibit 10.100

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

CAPTISOL® SUPPLY AGREEMENT

BY AND BETWEEN

CYDEX, INC.

AND

THE HOVIONE GROUP

Dated as of December 20, 2002

CAPTISOL® SUPPLY AGREEMENT

THIS CAPTISOL SUPPLY AGREEMENT (the "AGREEMENT") is entered into as of December 20, 2002 by and between:

(1) **CYDEX, INC.**, a Delaware corporation with an office at 12980 Metcalf Avenue, Suite 470, Overland Park, Kansas, 66213 ("CYDEX"); and

(2) **HOVIONE LLC**, a New Jersey limited liability company with an office at 40 Lake Drive, East Windsor, New Jersey 08250 ("AGENT"), acting as exclusive sales agent for the USA for the manufacturers, **HOVIONE FARMACIENCIA S.A.**, a Portuguese corporation ("HOVIONE SA"), and **HOVIONE PHARMASCIENCE LIMITED**, a Macau corporation ("HOVIONE LIMITED"), and acting as exclusive sales agent for the project manager **HOVIONE INTERNATIONAL LIMITED**, a Hong Kong corporation with an office at 172 Gloucester Road, Wanchai, Hong Kong ("HOVIONE INTERNATIONAL"), jointly and severally. AGENT, HOVIONE SA, HOVIONE LIMITED and HOVIONE INTERNATIONAL are collectively referred to herein as "HOVIONE").

BACKGROUND

CYDEX desires to purchase from HOVIONE, and HOVIONE desires to supply to CYDEX, CAPTISOL in accordance with the terms and conditions of this AGREEMENT.

AGREEMENTS

NOW, THEREFORE, in consideration of the mutual promises hereinafter made and the mutual benefits to be derived from this AGREEMENT, and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

ARTICLE I.
DEFINITIONS

Capitalized terms shall have the meanings ascribed to them in this Article I or as otherwise set forth in this AGREEMENT.

"AAA" has the meaning set forth in Section 10.4(b) hereof.

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

"AFFILIATE" means any individual, corporation or other legal entity which a party directly or indirectly through one or more intermediaries controls or which is controlled by or under common control with such party. For the purpose of this AGREEMENT, "control" means the possession, direct or indirect, of the power to direct or cause the direction of the management

and policies of an individual, corporation or other legal entity, whether through the ownership of voting securities, by contract, or otherwise.

"AGREEMENT" means this Captisol Supply Agreement between HOVIONE and CYDEX.

"ALTERNATE SUPPLIER" has the meaning set forth in Section 3.10(b) hereof.

"APPLICABLE LAWS" means all applicable laws, statutes, rules, regulations, ordinances, orders, decrees, writs, judicial or administrative decisions and the like of any nation or government, any state or other political subdivision thereof, any entity exercising executive, judicial, regulatory or administrative functions of or pertaining to government (including, without limitation, any governmental authority, agency, department, board, commission or instrumentality of any governmental unit or any political subdivision thereof), any tribunal or arbitrator of competent jurisdiction, and any self-regulatory organization.

"CAPTISOL" means ß-cyclodextrin sulfobutyl ether, sodium salt, as manufactured pursuant to the process set forth in Exhibit B hereto and meeting the SPECIFICATIONS.

"cGMP" means the then-current Good Manufacturing Practices as promulgated under the ACT at 21 CFR (chapters 210 and 211), as the same may be amended or re-enacted from time to time and as interpreted in accordance with then-current industry standards and FDA policies.

"CLAIM" has the meaning set forth in Section 10.4(a) hereof.

"COMMERCIAL PRODUCTION DATE" has the meaning set forth in Section 2.2 hereof.

"CONFIDENTIAL INFORMATION" means all information, data, know-how and all other business, technical and financial data disclosed pursuant to the terms of the Confidential Disclosure Agreement between the parties dated August 8, 2002 or hereunder by one party or any of its AFFILIATES to the other party or any of its AFFILIATES, except any portion thereof which:

(i) at the time of disclosure, is in the public knowledge;

(ii) after disclosure, becomes part of the public knowledge by publication or otherwise, except by breach of this AGREEMENT by the recipient;

(iii) the recipient can demonstrate by its written records was in the recipient's possession at the time of such disclosure, and which was not acquired, directly or indirectly, from the disclosing party;

(iv) is lawfully disclosed to the recipient on a non-confidential basis by a third party who is not obligated to the disclosing party or any other third party to retain it in confidence;

(v) results from research and development by the recipient independent of such disclosure and can be so documented in writing; or

(vi) is required to be disclosed by legal process; provided that in each such case the party so disclosing information timely informs the other party and uses its best efforts to limit the disclosure and maintain confidentiality to the extent possible and permits the other party to attempt by appropriate legal means to limit such disclosure.

"CONTRACT YEAR" means the twelve (12) month period commencing on the COMMERCIAL PRODUCTION DATE and ending on the first anniversary of the COMMERCIAL PRODUCTION DATE and each consecutive twelve (12) month period thereafter during the TERM.

"CYDEX" has the meaning set forth in the first paragraph hereof.

"CYDEX INDEMNIFIED PARTY" has the meaning set forth in Section 9.2 hereof.

"DATE OF MANUFACTURE" means the date on the certificate of analysis of each batch of CAPTISOL that evidences the release approval of the batch by HOVIONE.

"EFFECTIVE DATE" means January 1, 2003.

"FDA" means the United States Food and Drug Administration or any successor entity thereto.

"FORCE MAJEURE" has the meaning set forth in Section 10.1 hereof.

"FORECAST" has the meaning set forth in Section 3.5 hereof.

"HOVIONE" has the meaning set forth in the first paragraph hereof.

"HOVIONE INDEMNIFIED PARTY" has the meaning set forth in Section 9.1 hereof.

"HOVIONE QUALITY SYSTEM" means the procedures, methods and controls that are in force at HOVIONE manufacturing sites and that evidence compliance with the requirements of the FDA, other health authorities and the requirements of this AGREEMENT.

"ICH GUIDELINES" means all relevant guidelines promulgated from time to time by the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use.

"INITIAL TERM" means the period commencing upon the EFFECTIVE DATE and ending on December 31, 2010.

"IPEC GMPs" means Good Manufacturing Practices as promulgated from time to time by the International Pharmaceutical Excipients Council.

"INVENTION" means information relating to any innovation, improvement, development, discovery, computer program, device, trade secret, method, know-how, process, technique or the like, whether or not written or otherwise fixed in any form or medium, regardless of the media on which contained and whether or not patentable or copyrightable.

"LIABILITY" means any and all liabilities, losses, damages, penalties, fines, assessments, expenses and costs of any kind or nature required to be paid by a party hereunder (or its AFFILIATE) to any third party (which shall not include any AFFILIATE of such paying party), primary or secondary, direct or indirect, absolute or contingent, known or unknown, including without limitation costs of settlement, reasonable attorneys' fees and related costs and expenses and any liabilities for claims of personal injury or death, suffered or incurred by an indemnified party hereunder.

"PORTUGUESE CPI" has the meaning set forth in Section 4.2(e) hereof.

"PORTUGUESE CPI INCREASE" has the meaning set forth in Section 4.2(e) hereof.

"RULES" has the meaning set forth in Section 10.4(b) hereof.

"SPECIFICATIONS" means the written specifications for the CAPTISOL attached as Exhibit A hereto, as the same may be amended from time to time by CYDEX pursuant to the provisions of Section 6.3 herein.

"SUPPLY INTERRUPTION" has the meaning set forth in Section 3.10 hereof.

"TERM" has the meaning set forth in Section 5.1 hereof.

"UNIT PRICES" has the meaning set forth in Section 4.1 hereof.

Unless the context clearly indicates otherwise, the use herein of the singular shall include the plural, and the use of the masculine shall include the feminine.

ARTICLE II.
ENGINEERING AND VALIDATION

2.1 General. HOVIONE at its sole cost and expense, subject to the compensation payable by CYDEX pursuant to Section 2.5 hereof, shall perform all necessary engineering work, equipment acquisition and commissioning, training, validation activities and other work required for HOVIONE's Loures site to manufacture and supply CAPTISOL in accordance with the provisions of this AGREEMENT, including without limitation the manufacture and supply of CAPTISOL meeting the SPECIFICATIONS in accordance with the manufacturing process description attached hereto as Exhibit B. For clarity, HOVIONE at its sole cost and expense shall allocate or procure all necessary facilities and equipment (including without limitation spray dryers and analytical equipment) to manufacture and supply CAPTISOL. HOVIONE shall submit its protocols for engineering and validation batches to CYDEX for its approval prior to commencing any such batch, such approval not to be unreasonably withheld or delayed. CYDEX shall not unreasonably withhold or delay its approval of any matter described as requiring the approval of CYDEX in this Article II, provided that it shall be deemed reasonable

for CYDEX to withhold such approval if protocols, reports or any other matter fail to meet industry standards or if HOVIONE's equipment or process will not reasonably deliver CAPTISOL that would meet the warranties specified in Article VIII hereof. Protocols, reports and other documents to be provided by HOVIONE to CYDEX under this AGREEMENT, whether for approval or for information, shall be provided in English.

2.2 Timing. HOVIONE shall use its reasonable best efforts to accomplish the work and services required by this Article II for HOVIONE's Loures site in accordance with the Gantt chart timelines attached hereto as Exhibit C to achieve a date for its capability to commercially produce CAPTISOL in accordance with the provisions of this AGREEMENT. The actual date for such capability shall be referred to herein as the "COMMERCIAL PRODUCTION DATE", which shall be on or before May 31, 2004. In the event that HOVIONE fails to complete the work and services required by this Article II for HOVIONE's Loures site on or before [***], then CYDEX shall have the right in its discretion to terminate this AGREEMENT upon [***] days notice to HOVIONE, whereupon HOVIONE shall refund all amounts paid by CYDEX to HOVIONE to date hereunder within [***] days of such notice, and CYDEX shall have no further liability to make payments to HOVIONE hereunder.

2.3 Engineering Batches. HOVIONE shall successfully complete [***] full-scale engineering batches of CAPTISOL prior to [***]. Each such batch shall yield a minimum of [***] Kg of CAPTISOL to be an acceptable engineering batch. HOVIONE shall not commence engineering batches until CYDEX has approved, with respect to the equipment necessary for the manufacture of CAPTISOL, (i) HOVIONE's installation of such equipment (by inspection), (ii) the design qualification report for such equipment, (iii) the installation qualification report for such equipment, and (iv) the operational qualification report for such equipment. Engineering batches shall be manufactured in accordance with cGMP but shall not be required to meet the SPECIFICATIONS. The sole purpose of engineering batches is to detect deficiencies in the production line and to adjust the process parameters.

2.4 Validation Batches. HOVIONE shall successfully complete [***] full-scale validation batches of CAPTISOL prior to [***]. Each such batch shall yield a minimum of [***] Kg of CAPTISOL to be an acceptable validation batch. HOVIONE shall not commence validation batches until CYDEX has approved the results of the engineering batches.

2.5 Compensation for Engineering and Validation Work. As full compensation for the obligations of HOVIONE pursuant to this Article II, including without limitation the manufacture and supply of engineering and validation batches, CYDEX shall compensate HOVIONE as follows:

(a) Purchase of Engineering and Validation Batches. The purchase price for the engineering and validation batches referred to in Sections 2.3 and 2.4 hereof (and, for clarity, compensation to HOVIONE for any other batches that may be required if any validation batch fails; provided however that CYDEX shall have no responsibility to pay for any failed validation batch) shall be an amount equal to [***] Dollars US$[***], payable as follows:

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(i) An advance payment of [***] Dollars US$[***] %, together with CYDEX's first purchase order pursuant to Section 2.3 or 2.4 hereof, on or before [***];

(ii) A payment of [***] Dollars US$[***] % within [***] days after HOVIONE notifies CYDEX that HOVIONE has actually begun production of the first engineering batch, subject to CYDEX's approval of HOVIONE's protocol for such engineering batch and, with respect the equipment necessary for the manufacture of CAPTISOL, (A) the installation of such equipment (by inspection), (B) the design qualification report for such equipment, (C) the installation qualification report for such equipment, and (D) the operational qualification report for such equipment; and

(iii) A payment of [***] Dollars US$[***] % within [***] days after CYDEX approves HOVIONE's (A) certificates of analysis evidencing quality control release of all validation batches as to quality and intended purpose, and (B) process validation campaign report.

(b) Payment for HOVIONE Engineering Services. On or before [***] CYDEX shall issue a purchase order to HOVIONE for all engineering services required for the matters contemplated by this Article II, pursuant to which CYDEX shall pay HOVIONE a fee in the amount of [***] Dollars (US$[***], payable as follows:

(i) [***] Dollars (US$[***] % upon issuance of such purchase order;

(ii) [***] Dollars (US$[***] % on or before [***]

(iii) [***] Dollars (US$[***] % [***] days after CYDEX approves, with respect to the equipment necessary for the manufacture of CAPTISOL, (A) HOVIONE's installation of such equipment (by inspection), (B) the design qualification report for such equipment, (C) the installation qualification report for such equipment, and (D) the operational qualification report for such equipment; and

(iv) [***] Dollars (US$[***] % at the successful conclusion of the validation campaign, which for purposes of this clause shall be upon the parties' mutual approval of the final quality control release of the third consecutive validation batch that conforms with the warranties specified in Article VIII hereof with no significant process deviations.

HOVIONE shall reimburse CYDEX for such engineering fees in accordance with Section 4.2(h) and 5.3 (vii) hereof.

2.6 Available Capacity. From and after the COMMERCIAL PRODUCTION DATE during the TERM, HOVIONE shall at all times maintain an annual manufacturing capacity at its Loures site suitable to meet CYDEX's expected requirements of CAPTISOL as long as its

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FORECASTS do not exceed [***], provided that CYDEX shall provide FORECASTS pursuant to Section 3.5 hereof to permit HOVIONE to efficiently schedule the use of such capacity.

2.7 Macau Site. At such time as (i) the forecasted requirements by CYDEX for CAPTISOL pursuant to its FORECASTS equal or exceed [***] for any CONTRACT YEAR, or (ii) HOVIONE determines to be necessary or advisable and CYDEX does not unreasonably withhold approval, HOVIONE at its sole expense shall establish a second manufacturing facility for CAPTISOL at its Macau site capable of producing [***] of CAPTISOL per year and shall validate such site to permit the manufacture and supply of CAPTISOL at such site in accordance with the terms and conditions of this AGREEMENT, all on a timely basis for delivery of all quantities of CAPTISOL ordered by CYDEX hereunder. For the avoidance of doubt, there will be no reimbursement by CYDEX to HOVIONE for the costs and expenses of HOVIONE related to the Macau site, including without limitation engineering fees. Prior to use of the Macau facility for the production of CAPTISOL, such facility shall have passed inspection and audit by CYDEX for compliance with IPEC GMPs, FDA cGMPs, ICH GUIDELINES and other relevant guidance documents issued by IPEC, FDA and ICH. In consideration for HOVIONE having established a second facility to manufacture CAPTISOL, HOVIONE shall be free to choose to manufacture CAPTISOL in either facility as long as all quality and compliance requirements are met. From and after such time as HOVIONE begins to use its Macau site for the manufacture of CAPTISOL, HOVIONE shall at all times maintain an annual manufacturing capacity suitable to meet CYDEX's expected requirements of CAPTISOL up to [***].

2.8 Additional Engineering Services. At the reasonable request of CYDEX, but subject to advance notice and availability, HOVIONE shall provide additional engineering and process development services related to CAPTISOL at rates to be negotiated in good faith by the parties.

ARTICLE III.
MANUFACTURE AND DELIVERY OF CAPTISOL

3.1 Purchase and Sale. Pursuant and subject to the terms and conditions of this AGREEMENT, from and after the COMMERCIAL PRODUCTION DATE, HOVIONE agrees to manufacture CAPTISOL at its Loures and Macau facilities for CYDEX, and CYDEX agrees to purchase CAPTISOL from HOVIONE. All quantities of CAPTISOL manufactured or supplied by HOVIONE and its AFFILIATES shall be exclusively for CYDEX, and HOVIONE shall not manufacture or supply quantities of CAPTISOL for any third parties (whether or not such third parties have the legal right to license HOVIONE to do so) without the express written consent of CYDEX, which CYDEX may provide or withhold in its sole discretion.

3.2 CYDEX Purchase Requirements. CYDEX shall make the following purchases of CAPTISOL from HOVIONE, and HOVIONE shall supply to CYDEX such purchases:

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(a) First CONTRACT YEAR Commitment. CYDEX shall issue purchase orders for at least [***] but no more than [***] of CAPTISOL for deliveries in the first CONTRACT YEAR and shall issue said purchase order within [***] days after the EFFECTIVE DATE of this AGREEMENT. CYDEX may increase quantities of CAPTISOL ordered for delivery in the first CONTRACT YEAR and HOVIONE shall supply such quantifies on a best efforts basis, provided that CYDEX provides notice to HOVIONE of such change at least [***] months prior to the COMMERCIAL PRODUCTION DATE if the COMMERCIAL PRODUCTION DATE has been generally anticipated by the parties for at least [***] months.

(b) Requirements. From and after the COMMERCIAL PRODUCTION DATE, during the TERM, except as provided herein, CYDEX shall purchase its requirements of CAPTISOL exclusively from HOVIONE. Notwithstanding the foregoing, (i) such commitment shall not apply to customers or licensees of CYDEX who may have been or may be granted the legal right to independently source CAPTISOL, (ii) such commitment shall not apply if CYDEX's requirements for CAPTISOL exceed HOVIONE's ability to meet such requirements, (iii) such commitment is subject to Sections 10.1 (for FORCE MAJEURE) and 3.10 (for SUPPLY INTERRUPTION) hereof, and (iv) such commitment shall cease to apply if the average UNIT PRICE (estimated or actual) for a CONTRACT YEAR exceeds US$[***].

(c) US$[***] Minimum. During the TERM, CYDEX shall purchase from HOVIONE at least [***] Dollars US$[***] in purchase price value of CAPTISOL, at such times as CYDEX may determine in its discretion (subject to the forecasting and purchase order provisions of Sections 3.5 and 3.6 hereof). For clarity, the compensation paid by CYDEX to HOVIONE for engineering and validation batches pursuant to Section 2.5(a) hereof shall be counted and included within such aggregate requirement.

3.3 Supply Restrictions. All quantities of CAPTISOL manufactured or supplied by HOVIONE and its AFFILIATES shall be exclusively for CYDEX. Given the financial subsidies and technology transfer provided by CYDEX hereunder, during the TERM and for a period of [***] years following the TERM, HOVIONE and its AFFILIATES shall not (1) manufacture or supply quantities of CAPTISOL for any third parties (whether or not such third parties have the legal right to license HOVIONE to do so) without the express written consent of CYDEX, which CYDEX may provide or withhold in its sole discretion, and (ii) manufacture or supply any product similar to or competitive with CAPTISOL which would (A) infringe the proprietary rights owned by or licensed to CYDEX, or (B) utilize any information or technology provided by CYDEX to HOVIONE.

3.4 Labeling and Packaging. HOVIONE shall package and label CAPTISOL as directed from time to time by CYDEX at least [***] days prior to the relevant delivery of CAPTISOL. CYDEX shall be responsible for paying all out-of-pocket costs of the design of any new packaging and labeling of HOVIONE or CYDEX for CAPTISOL and shall provide to HOVIONE (which shall actually prepare such packaging and labeling) CYDEX's logo, color codes, designs, information, graphics and art work to be applied to CAPTISOL. HOVIONE

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acknowledges and agrees that the costs of all standard packaging and standard labeling for CAPTISOL are included in the UNIT PRICES for CAPTISOL. Any changes thereto shall be charged separately.

3.5 FORECASTS, Purchase Orders and Minimum Quantities. Within [***]) days after the commencement of any CONTRACT YEAR, CYDEX shall provide HOVIONE with a written [***] month forecast of its anticipated purchase order for commercial quantities of CAPTISOL for the subsequent CONTRACT YEAR ("FORECAST"), specifying quantities and delivery dates. Not later than [***] months in advance of such CONTRACT YEAR, CYDEX shall be required to place its irrevocable purchase order for [***] percent [***]% of the aggregate quantities of CAPTISOL specified in its FORECAST, provided that CYDEX shall have the right, with respect to not more than [***] percent [***]%of FORECASTED quantities, to (i) increase or decrease such FORECASTED quantities, and/or (ii) change the allocation of such quantities among deliveries scheduled and new delivery dates, provided in aggregate the changed amounts are not disproportionately concentrated in time thereby causing HOVIONE to produce and deliver in that period in excess of the [***] its obligations. CYDEX's irrevocable purchase order shall be for at least[***]. HOVIONE shall confirm acceptance of such annual irrevocable purchase order within [***]days of receipt. Should CYDEX desire to make additional changes in quantities and/or delivery dates, CYDEX shall notify HOVIONE and HOVIONE will use its best efforts to accommodate CYDEX's requests.

3.6 Supply. HOVIONE shall accept all such purchase orders for quantities up to [***] percent [***]% of the quantities specified in CYDEX's FORECASTS and shall supply all quantities of CAPTISOL so ordered to CYDEX within [***] days of the delivery date(s) specified in each such purchase order, unless otherwise agreed. HOVIONE shall advise and maintain regular communication with CYDEX regarding delays and progress on issued orders. No purchase order, shipping document, confirmation or waybill shall be deemed to modify, supplement or substitute for the terms and conditions of this AGREEMENT, except upon the mutual written agreement of the parties. All such documents shall be subject to, and shall be deemed to incorporate, the teens and conditions of this AGREEMENT.

3.7 Additional Inventory. HOVIONE shall manufacture and hold in inventory an additional quantity of CAPTISOL equal to [***] percent [***]% of the quantities specified by CYDEX in each of its purchase orders. CYDEX shall not be required to purchase or pay for such additional inventory until the earlier of (i) the date on which CYDEX requests that such additional inventory be delivered to CYDEX to meet unforeseen demand or replace interrupted manufacturing capacity, or (ii) [***] from the DATE OF MANUFACTURE.

3.8 Delivery. CAPTISOL shall be shipped by HOVIONE DDP (INCOTERMS 2000) by air to any destination (or multiple destinations) designated by CYDEX, provided said duties on CAPTISOL for said destination have been suspended. If duties cease to be suspended or if any other impositions, import duty or otherwise, cause additional delivery costs to HOVIONE beyond CIF costs, then HOVIONE shall be free to add such extra costs to the sales price of

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CAPTISOL. All deliveries of confirmed CYDEX orders shall be available for shipment to CYDEX on or before the date specified in the relevant purchase order. CYDEX may also direct HOVIONE to deliver CAPTISOL into CYDEX's inventory, stored at HOVIONE's site. HOVIONE warrants that such CAPTISOL shall be stored and preserved in accordance with mutually agreed conditions, and shall be labeled as inventory owned by CYDEX. HOVIONE shall maintain insurance for such CYDEX inventory with CYDEX named as an insured, and shall provide a certificate of such insurance to CYDEX upon its request from time to time. Such storage and insurance shall be provided without charge to CYDEX for a period of not more than [***] days counted as from DATE OF MANUFACTURE, and shall be provided to CYDEX by HOVIONE at HOVIONE's monthly storage rate thereafter, for the relevant quantity of CAPTISOL. At such times as CYDEX may direct to HOVIONE in writing, quantities of CAPTISOL from such inventory shall be further shipped by HOVIONE at its cost DDP (INCOTERMS 2000) by air to any destination (or multiple destinations) designated by CYDEX in quantities of no less than one batch. For smaller batches additional packing and freight charges shall apply.

3.9 Shortages/Damaged Goods/Rejected Goods.

(a) Shortages/Damaged Goods. CYDEX shall notify HOVIONE in writing of any obvious visible damage or obvious shortage in quantity of any shipment of CAPTISOL within its possession within [***] days after receipt by CYDEX. In the event of (i) any shortage in quantity of any shipment of CAPTISOL that is not within CYDEX's possession, (ii) any non-obvious shortage in quantity of any shipment of CAPTISOL within CYDEX's possession, or (iii) any non-obvious damage to any CAPTISOL, CYDEX shall notify HOVIONE in writing within [***] days after discovery of such shortage or damage. In the event of any shortage or damage as described in this Section 3.9(a), HOVIONE shall make up the shortage or replace the damaged shipment within [***] days after notification by CYDEX, if replacement CAPTISOL stock is available, or if no such replacement stock is available, CYDEX shall deduct the invoiced amount relating to any shortage of CAPTISOL or damaged CAPTISOL from payment of the HOVIONE invoice or invoices for such CAPTISOL.

(b) Rejected Goods. CYDEX shall notify HOVIONE in writing by issuing a complaint of any claim relating to any shipment of CAPTISOL failing to meet the SPECIFICATIONS or packaging requirements to be agreed upon (other than due solely to storage, handling or shipping by CYDEX, its AFFILIATES or customers) within [***] business days after delivery. Such notification shall specify the packaging size and lot number of such CAPTISOL. HOVIONE shall replace any such CAPTISOL that is rejected within [***] business days after notification by CYDEX, if replacement CAPTISOL stock is available. CYDEX shall not be responsible, and shall receive a credit from HOVIONE, for any additional costs of shipping and freight required to be paid as a result of any replacement of CAPTISOL under this Section 3.9(b). The provisions of this Section 3.9(b) shall not apply to CAPTISOL which fails to meet the SPECIFICATIONS or packaging requirements due solely to storage, handling or shipping by CYDEX, its AFFILIATES or customers. After CYDEX returns the

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non-compliant product to HOVIONE and if HOVIONE is unable to replace the returned product with an equal amount of compliant product, CYDEX may deduct the invoiced amount for any CAPTISOL which is rejected (other than due solely to storage, handling or shipping by CYDEX, its AFFILIATES or customers) from payment of the HOVIONE invoice or invoices for such CAPTISOL.

(c) Disputes. In the event of a dispute regarding whether any CAPTISOL fails to meet the SPECIFICATIONS which HOVIONE and CYDEX are unable to resolve, a sample of such CAPTISOL shall be submitted by one of the parties to an independent laboratory reasonably acceptable to both parties for testing and the test results obtained by such laboratory shall be final and controlling. The fees and expenses of such laboratory testing and all additional shipping and transportation costs incurred as a result of the dispute shall be borne entirely by the party against whom such laboratory's findings are made. In the event the test results indicate that the CAPTISOL in question fails to meet the SPECIFICATIONS, HOVIONE shall replace such CAPTISOL within [***] days after receipt of such results if replacement CAPTISOL stock is available. The party-not-at-fault shall not be responsible, and shall receive a credit from the party-at-fault, for any additional costs of shipping and freight required to be paid as a result of any replacement of CAPTISOL under this Section 3.9(c). After CYDEX returns the non-compliant product to HOVIONE and if HOVIONE is unable to replace the returned product with an equal amount of compliant product, CYDEX shall deduct the invoice amount for any CAPTISOL which is so determined to fail to meet the SPECIFICATIONS from payment of the HOVIONE invoice or invoices for such CAPTISOL.

(d) Time Limit. HOVIONE shall have no liability for any claim with regard to quality or compliance issues, shortage or damaged goods, or any other kind of complaint related to CAPTISOL, if HOVIONE is not notified thereof in writing within [***] of the date of invoice.

3.10 SUPPLY INTERRUPTION. For purposes of this AGREEMENT, a "SUPPLY INTERRUPTION" shall be deemed to occur: (i) if HOVIONE's ability to supply adequate quantities of CAPTISOL in saleable form in a timely manner to CYDEX is adversely affected or inhibited as reasonably determined by both parties, (ii) if HOVIONE notifies CYDEX of an event of FORCE MAJEURE pursuant to Section 10.1 hereof, or (iii) if in any [***] day period covered by a FORECAST, HOVIONE fails to deliver, in saleable form in accordance with the terms of this AGREEMENT, at least [***]% by quantity or by value of CAPTISOL ordered by CYDEX in accordance with its FORECASTS (for whatever cause or no cause). For purposes of this AGREEMENT, a SUPPLY INTERRUPTION shall be deemed to have been fully cured [***]. In the event of any SUPPLY INTERRUPTION, the following terms and conditions shall apply, which shall be cumulative and not in the alternative:

(a) Pro Rata Entitlement. In the event of a SUPPLY INTERRUPTION, CYDEX shall be entitled to a pro rata (in unit quantity) share of the manufacturing capacity of

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HOVIONE and its AFFILIATES for the manufacture of CAPTISOL as compared to the manufacture of other products, to the extent operationally relevant.

(b) ALTERNATE SUPPLIER. In the event of a SUPPLY INTERRUPTION, CYDEX shall have the right to designate and qualify one or more alternate suppliers for CAPTISOL, which selection need not be approved by HOVIONE (each an "ALTERNATE SUPPLIER"). HOVIONE, at CYDEX's expense, shall promptly provide at such times and locations as may reasonably be requested by CYDEX, reasonable cooperation to CYDEX in qualifying any ALTERNATE SUPPLIER. From the time that any SUPPLY INTERRUPTION begins until such SUPPLY INTERRUPTION is fully cured, and for a commercially reasonable period of time thereafter, CYDEX may obtain quantities of CAPTISOL from one or more ALTERNATE SUPPLIERS. [***].

(c) Termination of AGREEMENT. CYDEX may terminate this AGREEMENT if the SUPPLY INTERRUPTION is not fully cured within [***] days after the date on which the SUPPLY INTERRUPTION began as described in this Section 3.10.

3.11 Compliance with APPLICABLE LAWS. HOVIONE and its AFFILIATES shall comply fully with APPLICABLE LAWS in the performance of this AGREEMENT.

3.12 License. CYDEX grants to HOVIONE a royalty-free, non-exclusive license during the TERM to use the intellectual property rights of CYDEX solely to make CAPTISOL for sale to CYDEX under and pursuant to this AGREEMENT.

ARTICLE IV.
PRICES AND PAYMENT

4.1 Initial UNIT PRICES. As full compensation for the performance of HOVIONE hereunder for the manufacture and supply of CAPTISOL from its Loures site from and after the COMMERCIAL PRODUCTION DATE, CYDEX shall pay HOIVONE the following supply prices ("UNIT PRICES") for CAPTISOL:

Quantities of CAPTISOL Supplied in a CONTRACT YEAR	UNIT PRICES (US$)
Engineering Batches (in addition to those provided for under Section 2.3)	US$ [***]
Validation Batches (in addition to those provided for under Section 2.4)	US$ [***]
[***]	US$ [***]

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[***]	US$[***]
[***]	US$[***]

Such UNIT PRICES shall be adjusted only as provided in Section 4.2 hereof. An estimated UNIT PRICE for deliveries of CAPTISOL to be used for all invoices in a given CONTRACT YEAR shall be based on the purchase order for such CONTRACT YEAR. Within [***] days following the end of each CONTRACT YEAR, CYDEX shall submit to HOVIONE a reconciliation of the total amount that should have been paid by CYDEX for all quantities of CAPTISOL purchased during such CONTRACT YEAR in accordance with the actual UNIT PRICE against the total amounts actually billed by HOVIONE and paid for by CYDEX for such quantities based on the estimated UNIT PRICE for such year. If such reconciliation shows that CYDEX has overpaid for such purchases, then HOVIONE shall, upon [***] days' notice, at CYDEX's election, either refund such overpayment or credit such overpayment against future purchases of CAPTISOL. If such reconciliation shows that CYDEX has underpaid for such purchases, then CYDEX shall remit the balance so determined to be due to HOVIONE within [***] days of its submission of such reconciliation. Such UNIT PRICES include all raw materials, conversion costs and delivery costs (other than customs duties, if any, in the country where CAPTISOL is to be delivered as directed by CYDEX).

4.2 Adjustments to UNIT PRICES. The initial UNIT PRICES specified in Section 4.1 hereof shall be adjusted only as follows:

(a) Variance from Engineering Information. The initial UNIT PRICES specified in Section 4.1 represent the parties' best estimate as of the EFFECTIVE DATE for the cost of [***] for CAPTISOL and were based on the manufacturing efficiency set forth in Exhibit E and the information contained in Exhibit B. If and to the extent that HOVIONE can demonstrate by clear and precise evidence that the manufacturing efficiency set forth in Exhibit E is not achievable (any such evidence to be based on the first [***], then the initial UNIT PRICES (for the first CONTRACT YEAR, which shall also be the base reference point for future CONTRACT YEARS for which such revised UNIT PRICES will be adjusted pursuant to this and other clauses of this Section 4.2) as set out in Section 4.1 shall be [***] required to manufacture in accordance with the manufacturing efficiency set forth in Exhibit E, provided that no increase shall exceed [***] percent [***]% in the aggregate (i.e., the initial UNIT PRICE for quantities of CAPTISOL below [***] cannot be more than US$[***], subject to the other adjustments permitted by this Section 4.2).

(b) Currency Exchange Rates. UNIT PRICES for each CONTRACT YEAR shall be adjusted (after all other adjustments are made pursuant to this Section 4.2) for certain currency exchange rate changes as specified in Exhibit D hereto.

(c) Reduction in Raw Materials Usage. As of the [***] of the COMMERCIAL PRODUCTION DATE in 2006 and 2008, and if relevant each even-numbered year thereafter (i.e., 2010, 2012, etc.), the UNIT PRICES shall be increased or decreased, as the

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case may be, in an amount equal to [***] percent [***]% of the actual increase or decrease in the average cost of raw materials achieved (on the basis of the average per kilogram of raw materials used to the per kilogram of CAPTISOL manufactured) in the previous [***] CONTRACT YEARS related to greater efficiencies in the manufacturing process set forth in Exhibit B.

(d) Changes in Raw Materials Prices. UNIT PRICES for each CONTRACT YEAR shall be adjusted in an amount equal to [***]% of any increase or decrease in the costs of raw materials (on a per kilogram of raw materials basis) as compared to the previous CONTRACT YEAR.

(e) Changes in PORTUGUESE CPI. As of the anniversary of the COMMERCIAL PRODUCTION DATE in 2006 and 2008, and if relevant each even-numbered year thereafter (i.e., 2010, 2012, etc.), with sole respect to the conversion cost component (and not raw materials cost component) of each UNIT PRICE, each UNIT PRICE shall be increased or decreased [***](the "PORTUGUESE CPI"), using 118.2 on October 2002 (using the Base 100: 1997 series) as the base reference point (the "PORTUGUESE CPI INCREASE"). For purposes of this Section 4.2(e), the conversion cost component of a UNIT PRICE for purposes of computing the PORTUGUESE CPI INCREASE shall be the UNIT PRICE less [***]of CAPTISOL multiplied by the [***] on the said date divided by 118.2.

(f) Use of Macau Site. The UNIT PRICES for CAPTISOL manufactured and supplied from HOVIONE's Macau site shall not exceed the UNIT PRICES for CAPTISOL manufactured and supplied from HOVIONE's Loures site, as determined pursuant to this Article IV.

(g) Changes to SPECIFICATIONS or Process. In the event that CYDEX initiates a change to the SPECIFICATIONS or the testing or manufacturing process for CAPTISOL pursuant to Section 6.3 hereof, the UNIT PRICES shall be adjusted as provided in such Section 6.3.

(h) Reimbursement for Loures Engineering Services. At such time as CYDEX has completed payment of [***] Dollars (US$[***] to HOVIONE for CAPTISOL (including without limitation payments made by CYDEX pursuant to Section 2.5(a) hereof for engineering and validation batches), the UNIT PRICES for quantities of CAPTISOL shall be reduced for the next [***] Dollars (US$[***] worth of CAPTISOL ordered by CYDEX so that the [***] Dollar (US$[***] engineering fee paid by CYDEX pursuant to Section 2.5(b) hereof shall be reimbursed to CYDEX on a pro rata basis for such quantities of CAPTISOL.

4.3 Payment. All payments required by this AGREEMENT shall be made in United States Dollars. All invoices shall be paid by CYDEX not later than [***] days after the date of HOVIONE's invoice, which shall not be dated earlier than the delivery date specified in CYDEX's purchase order related to such invoice. Notwithstanding the foregoing, HOVIONE may invoice CYDEX for all CAPTISOL manufactured per CYDEX's purchase order within [***] days of the DATE OF MANUFACTURE of such CAPTISOL. Unless CYDEX notifies

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HOVIONE in writing of a good faith dispute, with respect to payments not received within [***] days after the date due, interest shall accrue on any amount overdue at the rate of one and [***] percent [***]%per month, such interest to begin accruing on a daily basis from the date due, and shall accrue both before and after judgment. Should CYDEX repeatedly delay payment of a HOVIONE invoice, or if HOVIONE should reasonably consider that a credit risk exists, HOVIONE shall be free to require that each purchase order be accompanied by an irrevocable and confirmed letter of credit issued by a USA bank.

4.4 Marketing. CYDEX shall be responsible for all advertising, marketing and sales costs associated with the distribution of CAPTISOL, and shall have complete authority for all resale pricing decisions for CAPTISOL.

4.5 Continuous Improvement. The parties, through specifically designated personnel of each party, shall collaborate on a regular basis during the TERM to identify, track and review specific cost-saving opportunities relating to the supply of CAPTISOL hereunder (including, without limitation, increasing manufacturing efficiencies and reducing raw materials and manufacturing costs).

ARTICLE V.
TERM AND TERMINATION

5.1 TERM of this AGREEMENT. The term of this AGREEMENT (the "TERM") shall be the INITIAL TERM together with any renewal terms pursuant to Section 5.2 hereof, unless this AGREEMENT is earlier terminated in accordance with the provisions of Section 5.3 hereof.

5.2 Renewal Periods. This AGREEMENT shall automatically continue after the INITIAL TERM for successive renewal terms of two (2) years each unless either party gives written notice to the other party of its intention to terminate this AGREEMENT at least [***] prior to the end of the INITIAL TERM or any renewal term.

5.3 Early Termination. Either CYDEX or HOVIONE, as the case may be, may terminate this AGREEMENT forthwith by notice in writing to the other party as follows:

(i) either party may terminate this AGREEMENT if the other party commits a material breach of this AGREEMENT, which in the case of a breach capable of remedy shall not have been remedied within [***] days of the receipt by the other party of a notice identifying the breach and requiring its remedy or such longer time as the party in breach may demonstrate to the other party is necessary to remedy the breach using its reasonable efforts to do so; or

(ii) either party may terminate this AGREEMENT without prior advance notice to the other party in the event that (i) the other party is declared insolvent or bankrupt by

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a court of competent jurisdiction; (ii) the other party files a voluntary petition of bankruptcy or insolvency or for reorganization or for an arrangement or for the appointment of a receiver or trustee of the party or of its assets, in any court of competent jurisdiction; or (iii) this AGREEMENT is assigned by such other party for the benefit of creditors; or

(iii) CYDEX may terminate this AGREEMENT upon [***] days' written notice in the event that the FDA or any other regulatory authority takes any action, or raises any objection, that prevents CYDEX from importing, exporting, purchasing or selling CAPTISOL; or

(iv) CYDEX may terminate this AGREEMENT effective immediately upon notice if at any time during the TERM HOVIONE or an AFFILIATE becomes debarred or receives notice of action or threat of action with respect to its debarment by the FDA or any other regulatory authority having jurisdiction over CAPTISOL. HOVIONE shall notify CYDEX immediately if at any time during the TERM HOVIONE or any of its AFFILIATES or their officers or employees becomes so debarred, or receives notice of action or threat of action with respect to any such debarment; or

(v) CYDEX may terminate this AGREEMENT in accordance with Section 2.2 or Section 3.10(c) hereof; or

(vi) either party may terminate this AGREEMENT in accordance with Section 10.1 hereof.

(vii) If prior to the end of the first CONTRACT YEAR HOVIONE is unable to meet the manufacturing efficiency set forth in Exhibit E, and an increase of [***] percent [***]% in UNIT PRICES as provided for in Section 4.2(a) is inadequate to compensate HOVIONE for its increased costs to manufacture CAPTISOL, and if other commercial arrangements cannot be agreed to between HOVIONE and CYDEX, HOVIONE shall be free to terminate this AGREEMENT by giving [***] prior written notice to CYDEX and by returning to CYDEX [***] percent [***]% of the amounts received from CYDEX under 2.5 (b) as well as those amounts received by HOVIONE from CYDEX under 2.5 (a) for which HOVIONE did not manufacture and supply the corresponding two (2) engineering batches and the [***] validation batches. During the [***] year period following HOVIONE's notice of termination, (i) CYDEX shall not be required to purchase CAPTISOL exclusively from HOVIONE, (ii) HOVIONE shall provide reasonable cooperation to CYDEX in qualifying any new supplier on reasonable terms to be negotiated, and (iii) HOVIONE shall manufacture and supply CAPTISOL to CYDEX on the terms and conditions of this AGREEMENT, provided however that the purchase price of CAPTISOL shall be determined as follows: UNIT PRICE (as set forth in Section 4.1 hereof) minus

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(raw material costs and delivery costs) minus [***] percent [***]% of UNIT PRICE) multiplied by the dividend of [***] plus [***] percent [***]% of UNIT PRICE).

Adjusted Unit Price=
[***]

Example: [***]

AUP = [***]

5.4 Consequences of Termination and Survival. Termination of this AGREEMENT for whatever reason shall not affect the accrued rights and obligations of HOVIONE or CYDEX arising under or out of this AGREEMENT. The provisions of Articles I, VII and X and of Sections 6.1, 6.6, 6.7, 6.8, 6.9, 9.1, 9.2, 9.3, 9.4, 9.6 and 9.7 of this AGREEMENT and this Section 5.4 shall survive the expiration or termination of this AGREEMENT or of any extensions thereof. In addition, any other provisions which are required to interpret and enforce the parties' rights and obligations under this AGREEMENT shall also survive such expiration or termination to the extent required for the full observation and performance of this AGREEMENT by the parties hereto.

ARTICLE VI.
MANUFACTURING COMPLIANCE, ACCESS AND REGULATORY MATTERS

6.1 Tests; Retained Samples; Documentation. HOVIONE shall perform, or cause to be performed, tests on each lot or batch of CAPTISOL manufactured pursuant to this AGREEMENT before delivery to CYDEX. Such tests shall include those referenced in Exhibit A and shall be used to determine compliance with the SPECIFICATIONS. Samples of CAPTISOL and the results of all such testing, certificates of analysis, release documents and similar documents shall be retained by HOVIONE in accordance with prudent industry standards and APPLICABLE LAWS and made available by HOVIONE to CYDEX upon its request for a period of [***] from the date of delivery to CYDEX pursuant to Section 3.8 hereof, or such longer period if any required by APPLICABLE LAWS.

6.2 Manufacturing Compliance. CAPTISOL shall be manufactured in accordance with IPEC GMPs, FDA cGMPs, ICH GUIDELINES, the manufacturing process description attached hereto as Exhibit B, and all APPLICABLE LAWS, and shall be manufactured and supplied from HOVIONE's Loures and Macau sites only.

6.3 Change Control. Any changes in SPECIFICATIONS or the test methods referenced in Exhibit A or manufacturing processes described in Exhibit B shall not be made by HOVIONE without CYDEX's prior substantive involvement and written approval, which

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approval may be withheld in CYDEX's sole discretion. CYDEX may make changes to such SPECIFICATIONS, test methods or manufacturing processes, provided that (i) CYDEX shall consult with HOVIONE prior to any such change to confirm that HOVIONE's manufacturing processes will permit such change, and (ii) in the event that raw materials costs or conversion costs are increased or decreased by any such change initiated by CYDEX, then the UNIT PRICES for CAPTISOL shall be increased or decreased, as the case may be, in an amount equal to such increase or decrease in costs. HOVIONE and CYDEX shall negotiate in good faith an equitable means of financing any costs associated with implementation of such a change request on commercially reasonable terms. If additional material capital equipment is required to implement any such change, the parties shall negotiate in good faith an equitable means of financing the costs of such equipment on commercially reasonable terms.

6.4 Access to Facilities. Upon the reasonable prior written request of CYDEX, CYDEX and/or customers of CYDEX shall have the right to inspect those portions of HOVIONE's manufacturing and testing facilities where CAPTISOL is being manufactured, tested or stored, as the case may be, during regular business hours, to ascertain compliance with the provisions of this AGREEMENT. The charges, if any, to be paid by CYDEX to HOVIONE for such purposes are specified in Exhibit E hereto.

6.5 Regulatory Correspondence. HOVIONE shall promptly (and in any event within [***] days after receipt by HOVIONE) provide to CYDEX copies of all correspondence to or from the FDA or any other governmental authority received by HOVIONE relating to CAPTISOL and all other correspondence received by HOVIONE bearing on the safety of CAPTISOL.

6.6 Inquiries and Complaints relating to CAPTISOL. Except for technical product complaints relating to the manufacture of CAPTISOL or as otherwise required by law or governmental regulation, CYDEX shall be responsible for investigating and responding to all inquiries, complaints and adverse events regarding CAPTISOL. It shall be CYDEX's right and responsibility to comply with all reporting requirements regarding adverse events and quality matters relating to the CAPTISOL.

6.7 Response to Complaints and/or Adverse Events. Pursuant to any reported complaint and/or adverse event, if the nature of the reported complaint and/or adverse or event requires testing, HOVIONE shall, at CYDEX's reasonable request and expense, perform, or cause to be performed, analytical testing of corresponding retention samples and provide the results thereof to CYDEX as soon as reasonably practicable; provided, however, that HOVIONE shall be responsible for the reasonable costs of such testing and reporting to the FDA or any other governmental regulatory agency if it is determined that HOVIONE is responsible for such reported complaint and/or adverse event. Such testing shall be performed using approved testing procedures.

6.8 Additional Information. HOVIONE shall provide to CYDEX in a timely manner, but in no event less than [***] days prior to the due date of CYDEX's annual update to its Drug

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Master File with respect to CAPTISOL, all information (in written form) which CYDEX reasonably requests regarding CAPTISOL in order to comply with APPLICABLE LAWS.

6.9 Recalls. In the event (i) the FDA or any other governmental or regulatory authority issues a directive, order or, following the issuance of a safety warning or alert with respect to CAPTISOL, a written request that CAPTISOL or any product containing CAPTISOL be recalled or retrieved, (ii) a court of competent jurisdiction orders such a recall or retrieval, or (iii) CYDEX determines that any CAPTISOL should be recalled or retrieved or that a "dear doctor" letter is required relating to restrictions on the use of CAPTISOL or any product containing CAPTISOL, the parties shall take all appropriate corrective actions, and shall cooperate in the investigations surrounding the recall, retrieval or letter. In the event that CYDEX reasonably determines that any CAPTISOL should be recalled, CYDEX shall consult with HOVIONE prior to taking any corrective actions. In the event that such recall results from any cause or event other than that arising from the defective manufacture, storage or handling which would constitute a breach by HOVIONE of this AGREEMENT, CYDEX shall be responsible for all documented out-of-pocket expenses of such recall consistent with directions received from the appropriate governmental or regulatory authority. In the event that such recall results from any cause or event arising from the defective manufacture, storage or handling which would constitute a breach by HOVIONE of this AGREEMENT, HOVIONE shall be responsible for all such documented out-of-pocket expenses. For purposes of this AGREEMENT, HOVIONE's expenses shall be limited to the expenses of notification and destruction or return of the recalled CAPTISOL and product containing CAPTISOL, all other documented out-of-pocket costs incurred in connection with such recall and the replacement of the recalled CAPTISOL and the product containing CAPTISOL, not to exceed the limit set forth in Section 9.7.

6.10 Compliance. HOVIONE ensures compliance with all the health authority requirements as well as client requirements through ensuring that all manufacturing and control operations meet the requirements of the HOVIONE QUALITY SYSTEM. This has been established in order to record and evidence compliance with all requirements. It is the responsibility of HOVIONE to ensure that the HOVIONE QUALITY SYSTEM is being constantly updated in a diligent manner and that it enables HOVIONE to meet the requirements set forth herein. It is the responsibility of CYDEX to audit HOVIONE a minimum of [***], such [***] and any follow up audit to be at no cost to CYDEX, to a level of detail that CYDEX considers appropriate in order to assure itself that the quality system in place at HOVIONE is adequate for HOVIONE to meet the requirements that CYDEX has requested of HOVIONE. Should CYDEX identify any system weakness, any event of non-compliance with any of the requirements, or any non-conformity, it shall notify HOVIONE within [***] by means of an audit report or by means of a complaint. HOVIONE shall respond in writing within [***]. Any audits in excess of the [***] by CYDEX or a CYDEX customer will be charged to CYDEX at a rate to be negotiated in good faith by the parties.

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6.11 Relationship Management. The parties hereto hereby agree to create a Technical Committee and a Management Committee.

The Technical Committee shall be composed of one representative of each party. Initially, such representatives shall be:

- for CYDEX: Mr. Doug Hecker
- for HOVIONE: Mr. Jorge Pastilha

Each party may designate a replacement representative to the Technical Committee at any time during the TERM upon written notice to the other party. The Technical Committee shall be in charge of resolving all technical issues relating to the installation and qualification of the manufacturing facilities of CAPTISOL, change control and all documentation issues, and determining mutually agreeable performance indicators in terms of compliance, quality, supply, service, hygiene, safety and environment and costs and cost reductions, as set out in this AGREEMENT, in the spirit of continuous improvement.

The Management Committee shall be composed of one representative of each Party. Initially, such representatives shall be

- for CYDEX: Dr. Joseph Lacz
- for HOVIONE: Mr. David Hoffman

Each party may designate a replacement representative to the Management Committee at any time during the TERM upon written notice to the other party. Such Management Committee shall be in charge of reviewing the performance indicators as defined by the Technical Committee, confirming the UNIT PRICES applicable for each CONTRACT YEAR, managing the relationship between the parties with the aim of continuous improvement and, if necessary, resolving amicably any potential dispute between the parties.

Meetings of both Committees shall be held as often as necessary upon request of one of its members and at least every [***] months. Decisions of both Committees shall be taken unanimously by their members. In the event a Committee is unable to reach a unanimous decision, such issue shall constitute a CLAIM and shall be resolved in accordance with the provisions of Section 10.4 of this AGREEMENT. For each meeting of both Committees, written minutes shall be established and signed by each member.

The teams shall operate according to sound principles of project management which include:

- Regular meetings face-to-face, by telephone or video-conference with a well-defined agenda and meeting minutes.
- Well-defined tasks with a defined responsible party and a deadline. All such tasks shall be well-identified in an overall Gantt chart describing the calendar of the project.

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Meetings of both Committees shall be held either:t i) alternatively, at HOVIONE's premises in Loures and at CYDEX's premises in Kansas City or ii) at HOVIONE's Technology Transfer Center in East Windsor, New Jersey. The inviting party shall take care of the organization of the meeting, the preparation of the agenda, the drafting and distribution of the minutes.

ARTICLE VII.
CONFIDENTIALITY AND PROPRIETARY RIGHTS

7.1 Confidentiality. Except as otherwise provided in this Section 7.1:

(i) HOVIONE and its AFFILIATES will retain in confidence and use only for the purposes contemplated hereby any CONFIDENTIAL INFORMATION disclosed to it by or on behalf of CYDEX in connection with the performance of this AGREEMENT; and

(ii) CYDEX and its AFFILIATES will retain in confidence and use only for the purposes contemplated hereby any CONFIDENTIAL INFORMATION disclosed to it by or on behalf of HOVIONE in connection with the performance of this AGREEMENT.

To the extent it is reasonably necessary or appropriate to fulfill its obligations or exercise its rights under this AGREEMENT or any rights which survive termination or expiration hereof, each party may disclose CONFIDENTIAL INFORMATION to its AFFILIATES (and with respect to CYDEX, its customers/licensees) on condition that such entities or persons agree (a) to keep the CONFIDENTIAL INFORMATION confidential to the same extent as each party is required to keep the CONFIDENTIAL INFORMATION confidential and (b) to use the CONFIDENTIAL INFORMATION only for such purposes as such party is entitled to use the CONFIDENTIAL INFORMATION.

7.2 Proprietary Rights.

(a) CYDEX Information. CYDEX shall own and retain all right, title and interest in and to all information, documents and tangible and intangible materials which CYDEX provides to HOVIONE in connection with this AGREEMENT.

(b) Work Product. CYDEX shall own and shall have all rights to use all information, documents and tangible and intangible materials which result from the performance by HOVIONE of the services contemplated by this AGREEMENT (including, without limitation, data, test results, measurements, quantitative and qualitative analyses, processes, samples, and inventions and technology relating to CAPTISOL).

(c) INVENTIONS. All INVENTIONS relating to CAPTISOL which are conceived or created by HOVIONE and/or its AFFILIATES or their agents or jointly by CYDEX and HOVIONE and/or its AFFILIATES or their agents in contemplation of or in the course of performing services under this AGREEMENT shall be owned by CYDEX, provided that CYDEX shall and hereby does grant to HOVIONE a perpetual, royalty-free, non-exclusive, world-wide, irrevocable license (without the right to sublicense) to use and/or practice all such

INVENTIONS to (i) manufacture CAPTISOL pursuant to this AGREEMENT, and (ii) manufacture and sell any other product not similar to or competitive with CAPTISOL or any other product being developed or commercialized by CYDEX or its AFFILIATES from time to time. For a period [***] from the EFFECTIVE DATE, CYDEX shall provide HOVIONE with the preferred opportunity to obtain additional manufacturing business from CYDEX to the extent that INVENTIONS which are conceived or created by HOVIONE and/or its AFFILIATES or their agents or jointly by CYDEX and HOVIONE and/or its AFFILIATES or their agents (i) provide CYDEX an additional period of exclusivity, or (ii) relate to the synthesis or isolation of CAPTISOL and are required for the performance of the subject manufacturing services. CYDEX shall award such manufacturing business to HOVIONE if (y) HOVIONE has the capability to provide equivalent service quality as other bidding parties, and (z) HOVIONE's bid to provide such manufacturing services is not more than [***] percent [***]% of the lowest third party bid.

(d) Trademarks. CYDEX shall retain all right, title and interest arising under all APPLICABLE LAWS in the trademark "CAPTISOL®" and all other trademarks and trade names related to or associated with CYDEX or CAPTISOL and in all other trademarks and trade names which may be adopted with respect to CAPTISOL.

(e) Further Assurances. Upon the reasonable request of CYDEX, HOVIONE and its AFFILIATES shall without additional consideration execute and deliver such assignments and other documents as may be necessary to give effect to the provisions of this Section 7.2.

7.3 Patents. If during the TERM HOVIONE authors one or more patents that become instrumental at extending the commercial life of CAPTISOL, then at CYDEX's sole discretion, HOVIONE may be awarded a fee of no less than [***] Dollars ($[***] net per each US patent that issues and is assigned to CYDEX.

ARTICLE VIII.
WARRANTIES

8.1 Quality of CAPTISOL. HOVIONE warrants to CYDEX that all CAPTISOL manufactured and supplied to CYDEX pursuant to this AGREEMENT shall, at the time of delivery pursuant to Section 3.8 hereof:

(i) meet the SPECIFICATIONS for CAPTISOL in effect at the time of such delivery;

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(ii) not be adulterated within the meaning of the ACT and shall not be an article which may not, under the provisions of the ACT, be introduced into interstate commerce; and

(iii) be free and clear of all liens, security interests and other encumbrances.

8.2 Quality of Performance. HOVIONE warrants to CYDEX that the performance of the obligations of HOVIONE hereunder, including without limitation the manufacture and supply of CAPTISOL, shall in all respects be in accordance with:

(i) IPEC GMPs;

(ii) FDA cGMPs;

(iii) ICH GUIDELINES; and

(iv) APPLICABLE LAWS.

8.3 Mutual Representations and Warranties. Each party represents and warrants to the other as follows:

(a) Power and Authorization. It has all requisite power and authority (corporate and otherwise) to enter into this AGREEMENT and has duly authorized by all necessary action the execution and delivery hereof by the officer or individual whose name is signed on its behalf below.

(b) No Conflict. Its execution and delivery of this AGREEMENT and the performance of its obligations hereunder do not and will not conflict with or result in a breach of or a default under its organizational instruments or any other agreement, instrument, order, law or regulation applicable to it or by which it may be bound.

(c) Enforceability. This AGREEMENT has been duly and validly executed and delivered by it and constitutes its valid and legally binding obligation, enforceable in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency or other laws of general application relating to or affecting the enforcement of creditors' rights and except as enforcement is subject to general equitable principles.

8.4 Exclusion of Other Warranties. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, EACH PARTY DISCLAIMS ALL WARRANTIES IN RESPECT OF CAPTISOL AND THIS AGREEMENT, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

ARTICLE IX.
INDEMNIFICATION, LIMITATION OF LIABILITY AND INSURANCE

9.1 Indemnification by CYDEX. CYDEX shall indemnify, defend and hold harmless HOVIONE and its AFFILIATES, and their employees, officers and directors, and their successors and assigns (each, an "HOVIONE INDEMNIFIED PARTY"), from and against any and all LIABILITIES which the HOVIONE INDEMNIFIED PARTY may incur, suffer or be required to pay resulting from or arising in connection with the breach of this AGREEMENT by CYDEX or its AFFILIATES, except to the extent that any such LIABILITY is due to the negligence or wrongful act(s) of a HOVIONE INDEMNIFIED PARTY.

9.2 Indemnification by HOVIONE. HOVIONE shall indemnify, defend and hold harmless CYDEX and its AFFILIATES, employees, officers and directors and its successors and assigns (each, a "CYDEX INDEMNIFIED PARTY"), from and against any and all LIABILITIES which the CYDEX INDEMNIFIED PARTY may incur, suffer or be required to pay resulting from or arising in connection with the breach of this AGREEMENT by HOVIONE or its AFFILIATES, except to the extent that any such LIABILITY is due to the negligence or wrongful act(s) of a CYDEX INDEMNIFIED PARTY.

9.3 Process of Indemnification. Promptly after an indemnified party becomes aware of any potential LIABILITY hereunder, such party shall deliver written notice to the indemnifying party, stating the nature of the potential LIABILITY; provided, however, that the delay in giving or the failure to give such notification shall not affect the indemnification provided hereunder except to the extent the indemnifying party shall have been actually prejudiced as a result of such delay or failure. The indemnified party shall give the indemnifying party such information with respect to the potential LIABILITY as the indemnifying party may from time to time reasonably request. The indemnifying party shall have the right to conduct the defense of any suit, claim or other proceeding related to the LIABILITY if it has assumed responsibility for the suit, claim or other proceeding in writing; provided, however, if in the reasonable judgment of the indemnified party, such suit, claim or proceeding involves an issue or matter which could have a material adverse effect on the business, operations or assets of the indemnified party, the indemnified party may elect, at its own expense, to conduct a separate defense thereof, but in no event shall any such election be construed as a waiver of any indemnification rights such indemnified party may have under this Article VIII, at law or in equity, or otherwise. If the indemnifying party defends the suit or claim, the indemnified party may participate in (but not control) the defense thereof at its sole cost and expense; provided, however, that the indemnifying party shall pay the reasonable fees and costs of any separate counsel to the extent such representation is due to a conflict of interest between the parties.

9.4 Settlements. Neither party may settle a claim or action related to a LIABILITY without the consent of the other party, which consent shall not be unreasonably withheld, if such settlement would impose any monetary obligation on the other party or require the other party to submit to an injunction or otherwise limit the other party's rights under this AGREEMENT, and any payment made by a party in such a settlement without obtaining such consent shall be at its own cost and expense. Notwithstanding the foregoing, the indemnifying party will be liable under this Article VIII for any settlement effected without its consent if the indemnifying party has refused to acknowledge liability for indemnification hereunder and/or declines to defend the

indemnified party in any such claim, action or proceeding and it is determined by arbitration pursuant to Section 10.4 hereof that the indemnifying party was liable to the indemnified party for indemnification related to such settlement.

9.5 General Liability Insurance. HOVIONE shall obtain and maintain in effect for the term of this AGREEMENT general liability insurance or indemnity policies with an insurer reasonably satisfactory to CYDEX, in an amount not less than US$[***], which policies shall name CYDEX as an additional insured.

9.6 CAPTISOL Liability Claims. As soon as it becomes aware, each party shall give the other party prompt written notice of any claim involving CAPTISOL, any injury alleged to have occurred as a result of the use or application of CAPTISOL, and any circumstances that may give rise to litigation or recall of CAPTISOL or regulatory action that may affect the sale of manufacture of CAPTISOL, specifying, to the extent the party has such information, the time, place and circumstances thereof and the names and addresses of the persons involved. Each party shall also furnish promptly to the other party copies of all papers received in respect of any claim, action or suit arising out of such alleged defect or, injury or regulatory action. HOVIONE shall have no responsibility for any CAPTISOL liability claim except to the extent such claim results from the defective manufacture, storage or handling of CAPTISOL which would constitute a breach by HOVIONE of this AGREEMENT.

9.7 Limitation of Liability. With the exception of cases of gross negligence or willful misconduct, HOVIONE's maximum aggregate liability under this AGREEMENT to CYDEX in all other cases shall not exceed [***].

ARTICLE X.
GENERAL PROVISIONS

10.1 FORCE MAJEURE. Neither party shall be held liable or responsible for failure or delay in fulfilling or performing any of its obligations under this AGREEMENT (other than the payment of money owed hereunder) to the extent that such failure or delay results from any cause to the extent beyond its reasonable control, including, without limitation, fire, flood, typhoon, earthquake, natural disaster, explosion, war, strike, labor unrest, riot, embargo, acts of terrorism, acts or omissions of carriers, act of God or enactment or revision of any law, rule, regulation or regulatory advisory opinion or order applicable to the manufacturing, marketing, sale, reimbursement and/or pricing of CAPTISOL ("FORCE MAJEURE"). The supply prices of raw materials and changes in conversion costs shall not be considered to be FORCE MAJEURE. Such excuse shall continue as long as the FORCE MAJEURE event continues, following which such party shall promptly resume performance hereunder. The party affected by a FORCE MAJEURE event shall notify the other party thereof as promptly as practicable after its

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

occurrence. Such notice shall describe the nature of such FORCE MAJEURE event and the extent and expected duration of the affected party's inability fully to perform its obligations hereunder. The affected party shall use due diligence, where practicable, to minimize the effects of or end any such event so as to facilitate the resumption of full performance hereunder and shall notify the other party when it is again fully able to perform such obligations. Should the delay resulting from a FORCE MAJEURE event exceed [***], the non-invoking party shall then have the right to terminate this AGREEMENT upon [***] days notice. From the time that any FORCE MAJEURE begins until such FORCE MAJEURE is fully cured, and for a commercially reasonable period of time thereafter, CYDEX may obtain quantities of CAPTISOL from one or more third parties. CYDEX shall not be obligated to purchase FORECASTED quantities of CAPTISOL if CYDEX has entered into a contract to purchase CAPTISOL from an ALTERNATE SUPPLIER.

10.2 Governing Law. This AGREEMENT shall be construed in accordance with the laws of the State of Delaware in the United States of America, without giving effect to the principles of conflicts of law thereof.

10.3 Headings and References. All section headings contained in this AGREEMENT are for convenience of reference only and shall not affect the meaning or interpretation of this AGREEMENT.

10.4 Dispute Resolution.

(a) Negotiation. Any dispute, controversy or claim arising out of or relating to this AGREEMENT, the validity of this AGREEMENT or the breach or termination of this AGREEMENT or the rights of either party for indemnification hereunder (each, a "CLAIM"), shall be submitted in the first instance to the Chief Executive Officer of HOVIONE for HOVIONE and the Chief Executive Officer of CYDEX for CYDEX.

(b) Arbitration. If any CLAIM cannot be resolved by the individuals designated in Section 10.4 (a) within [***] days after being submitted to them, and except for the right of either party to apply to a court of competent jurisdiction for a temporary restraining order to preserve the status quo or to prevent irreparable harm pending the selection and confirmation of a panel of arbitrators in accordance herewith, such CLAIM shall be exclusively and finally resolved by arbitration in accordance with the Commercial Arbitration Rules (the "RULES") of the American Arbitration Association (the "AAA") in effect on the day the arbitration is commenced in accordance with this AGREEMENT, except as modified by this Section 10.4. After expiration of the [***] day period pursuant to Section 10.4(a) hereof, either party may commence arbitration by serving upon the other party a written demand for arbitration sent by a courier service of internationally recognized reputation, in accordance with this AGREEMENT, with a copy of the same delivered by a courier service of internationally recognized reputation, to the AAA regional office in which either party is then located. The number of arbitrators shall be three (3), one (1) of whom is selected by CYDEX, one (1) of whom is selected by HOVIONE and one (1) of whom is selected by HOVIONE and CYDEX (or by the other two arbitrators if

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

the parties cannot, within [***] after the commencement of the arbitration proceeding, agree on the third arbitrator). In the event that either party shall fail to appoint an arbitrator within [***] days after the commencement of the arbitration proceeding, such arbitrator and the third arbitrator shall be appointed by the AAA in accordance with the RULES. The arbitration award shall be in English rendered by a majority of the members of the board of arbitration. The panel shall not be entitled to modify this AGREEMENT or the transactions contemplated herein. The arbitration proceeding shall be conducted in the English language and shall be brought in New York, New York, USA unless the parties agree in writing to conduct the arbitration in another location. The AAA shall have jurisdiction over all parties to this AGREEMENT for purposes of the arbitration and the parties hereby expressly consent to such jurisdiction.

(c) Arbitral Award. The arbitration decision shall be final and binding. The prevailing party may enter such decision in any court having competent jurisdiction. Each party hereby expressly waives any right to object to such jurisdiction on the basis of venue or forum non conveniens. Each party waives any right it may have by statute, treaty or law to contest the jurisdiction or venue of any court or service made pursuant to Section 10.8 (Notices) hereof in an action or proceeding to enforce an arbitral award, including without limitation any right under the Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters and the Hague Convention on the Taking of Evidence Abroad in Civil or Commercial Matters, and each party agrees that the validity of arbitral awards shall only be challenged in accordance with Article V of the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards. Each party consents to the jurisdiction and administration of the AAA for purposes of the arbitration proceedings contemplated herein.

(d) Remedies. Notwithstanding any other provision of this AGREEMENT, any party may apply to a court of competent jurisdiction for an order in the nature of a temporary restraining order or preliminary injunction for purposes of maintaining the status quo pending the final resolution of any dispute pursuant to the arbitration provisions hereof. The parties shall have all rights and remedies provided under Delaware law related to the enforcement of this AGREEMENT.

(e) Expenses. The expenses of any arbitration including the reasonable attorney fees of the prevailing party, shall be borne by the party deemed to be at fault or on a pro-rata basis should the arbitration conclude in a finding of mutual fault.

10.5 Severability, If any provision of this AGREEMENT is held by a court of competent jurisdiction to be invalid or unenforceable, it shall be modified to the minimum extent necessary to make it valid and enforceable.

10.6 Entire Agreement. The Confidential Disclosure Agreement between the parties dated August 8, 2002, this AGREEMENT and the Exhibits hereto constitute the entire AGREEMENT between the parties relating to the subject matter hereof and supersede all previous writings and understandings, whether oral or written, relating to the subject matter of this AGREEMENT.

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

10.7 Amendment. This AGREEMENT may not be amended, supplemented or otherwise modified except by an instrument in writing signed by the parties that specifically refers to this AGREEMENT.

10.8 Notices. Any notice required or permitted under this AGREEMENT shall be in writing and sent by a courier service of internationally recognized reputation, charges prepaid, or by facsimile transmission with confirmation by reputable courier service, to the address or facsimile number specified below. Such notices shall be deemed given three [***] days following deposit with such courier service or [***] following such facsimile transmission.

If to HOVIONE:	Hovione LLC 40 Lake Drive East Windsor, New Jersey 08250 USA Attention: President, US Operations Facsimile: 609-918-2420
With a copy to:	Hovione FarmaCiencia Sete Casas, Loures Portugal Attention: Chief Executive Officer Facsimile: 01-351-21-982-9498
If to CYDEX:	CyDex, Inc. Suite 470 12980 Metcalf Avenue Overland Park, Kansas, 66213 USA Attention: Chief Executive Officer Facsimile: +1-913-685-8856
With a copy to:	CyDex, Inc. Suite 470 12980 Metcalf Avenue Overland Park, Kansas, 66213 USA Attention: General Counsel Facsimile: +1-913-685-8856

10.9 Assignment and Binding Effect. Neither party shall assign its rights or delegate or subcontract its duties in whole or in part under this AGREEMENT without the other party's prior written consent, which consent shall not be unreasonably withheld or delayed, provided that the assigning party shall guarantee to the other party all of such party's obligations hereunder and the assignee shall undertake in writing to observe and perform such obligations. Notwithstanding the foregoing, CYDEX may assign its rights and/or delegate its duties hereunder without the consent of HOVIONE to (i) the purchaser of substantially all of the assets

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of CYDEX related to its CAPTISOL business, or (ii) an AFFILIATE of CYDEX. In the event that CYDEX assigns its rights and/or delegates its duties hereunder without the consent of HOVIONE, then all terms and conditions of this AGREEMENT shall survive and the assignee of such CYDEX rights, or whomsoever CYDEX delegates its right to, shall also enjoy the rights and obligations set out in this AGREEMENT. As a result of such assignment or delegation, or whatever transfer, HOVIONE's rights hereunder may not be hurt, reduced or affected. CYDEX acknowledges that HOVIONE may determine which HOVIONE party hereto (*i.e.*, AGENT, HOVIONE SA, HOVIONE LIMITED or HOVIONE INTERNATIONAL) shall perform particular obligations hereunder. Any other assignment shall be void. Any other delegation or subcontracting shall be a breach of this AGREEMENT.

10.10 No Agency. It is understood and agreed that each party shall have the status of an independent contractor under this AGREEMENT and that nothing in this AGREEMENT shall be construed as authorization for either party (as between CYDEX and HOVIONE) to act as agent for the other, provided that HOVIONE represents and warrants to CYDEX that AGENT is duly authorized to act for and legally bind all of the HOVIONE parties related to this AGREEMENT.

10.11 No Strict Construction. This AGREEMENT has been prepared jointly and shall not be strictly construed against any party.

10.12 Counterparts. This AGREEMENT may be executed in multiple counterparts, each of which shall be an original as against any party whose signature appears thereon but both of which together shall constitute one and the same instrument.

Remainder of this page left blank intentionally.

IN WITNESS WHEREOF, the parties, through their authorized representatives, have duly executed this AGREEMENT as of the date first written above.

CYDEX, INC.

By:	/s/ Edward W. Mehrer
Name:	EDWARD W. MEHRER
Title:	Chief Executive and Pres.
Date:	1/10/03

By:	/s/ Susan M. Gardner
Name:	Susan M. Gardner
Title:	VP & General Counsel
Date:	1/10/03

HOVIONE LLC

By:	/s/ David Hoffman
Name:	DAVID HOFFMAN
Title:	PRESIDENT US OPERATIONS
Date:	7 JAN. 2003

By:	/s/ Lavinia Emery
Name:	Lavinia Emery
Title:	Office Manager
Date:	7 Jan. 2003

Accepted and agreed:

HOVIONE FARMACIENCIA S.A.

By:	/s/ Noé Carreira
Name:	NOÉ CARREIRA
Title:	S.TE GENERAL MANAGER - DIRECTOR
Date:	20 DEC 2002 in LOURES

By:	/s/ Jorge Pasticha
Name:	JORGE PASTICHA
Title:	DIRECTOR – CONTROL AND LOGISTICS
Date:	20 December 2002

HOVIONE PHARMASCIENCE LIMITED

By:	/s/ G. Villax
Name:	G. Villax
Title:	Chief Executive & Director
Date:	23 DEC 2002 in Montella

By:	/s/ Christina Bismarck
Name:	CHRISTINA BISMARCK
Title:	—
Date:	Montella, 23 December 2002

HOVIONE INTERNATIONAL LIMITED

By:	/s/ G. Villax
Name:	G. Villax
Title:	Chief Executive & Director
Date:	23 DEC 2002 in Montella

By:	/s/ Christina Bismarck
Name:	CHRISTINA BISMARCK
Title:	—
Date:	Montella, 23 December 2002

EXHIBIT A

Initial CAPTISOL SPECIFICATIONS

[***]

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

Exhibit B

MANUFACTURING PROCESS DESCRIPTION

[***]

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

Exhibit C
Engineering and Validation Process [***]

[***].

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

EXHIBIT D

CALCULATION OF ADJUSTED UNIT PRICES
FOR CERTAIN CURRENCY EXCHANGE RATE DEVIATIONS

[***]

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

EXHIBIT E

MANUFACTURING EFFICIENCY

[***]

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

Exhibit 10.101

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

1st Amendment to the

CAPTISOL® SUPPLY AGREEMENT
dated as of
December 20th, 2002

BY AND BETWEEN

CYDEX, INC.

AND

THE HOVIONE GROUP

Dated as of July 29, 2005

TABLE OF EXHIBITS

1st AMENDMENT TO THE CAPTISOL® SUPPLY AGREEMENT

THIS 1st AMENDEMENT TO THE CAPTISOL SUPPLY AGREEMENT (the "AGREEMENT") is entered into as of the 29th of July 2005, by and between:

(1) **CYDEX, INC.**, a Delaware corporation with an office at 10513 W. 84th Terr, Lenexa, Kansas, 66214 ("CYDEX"); and

(2) **HOVIONE LLC**, a New Jersey limited liability company with an office at 40 Lake Drive, East Windsor, New Jersey 08250 ("AGENT"), acting as exclusive sales agent for the USA for the manufacturers, **HOVIONE FARMACIENCIA S.A.**, a Portuguese corporation ("HOVIONE SA"), and **HOVIONE PHARMASCIENCE LIMITED**, a Macau corporation ("HOVIONE LIMITED"), and acting as exclusive sales agent for the project manager **HOVIONE INTERNATIONAL LIMITED**, a Hong Kong corporation with an office at 172 Gloucester Road, Wanchai, Hong Kong ("HOVIONE INTERNATIONAL"), jointly and severally. AGENT, HOVIONE SA, HOVIONE LIMITED and HOVIONE INTERNATIONAL are collectively referred to herein as "HOVIONE").

BACKGROUND

Both parties declare that the original intent of the AGREEMENT entered into has been met and remains valid. Parties feel that it is appropriate to clarify and update certain matters contained in said AGREEMENT as such this 1st Amendment has been agreed to and is amended as follows.

AGREEMENTS

NOW, THEREFORE, in consideration of the mutual promises hereinafter made and the mutual benefits to be derived from this 1st AMENDMENT TO THE AGREEMENT, and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

1. With reference to Article 1, the following definitions have been amended:

"COMMERCIAL PRODUCTION DATE" has the meaning set forth in Section 2.2 hereof, or more specifically the 26th August 2005.

"INITIAL TERM" means the period commencing upon the EFFECTIVE DATE and ending on March 31, 2012.

2. With reference to clause 2.2 Timing, the parties agree that:

In the second sentence of clause 2.2, the clause ", which shall be on or before May 31, 2004" is hereby deleted.

3. With reference to clause 4.2 Adjustments to UNIT PRICES - Parties agree that:

1) There has been no material Variance from Engineering Information. Based on the evidence of the production campaigns performed since 2004, the actual costs, the manufacturing efficiency set forth in Exhibit E and the information contained in Exhibit B, there is no evidence of an increase in total cost necessary to achieve the manufacturing efficiency set forth in Exhibit E. Pricing and unit rates applicable after the COMMERCIAL PRODUCTION DATE are confirmed as per Exhibit F.

2) Currency Exchange Rates. The Parties acknowledge that pursuant to clause 4.2(b), the UNIT PRICES for the first CONTRACT YEAR are subject to adjustment pursuant to Exhibit D based on the ACTUAL EXCHANGE RATE of US$[***], as reported by *The Wall Street Journal*, Eastern U.S. edition for the COMMERCIAL PRODUCTION DATE.

4. With reference to Article 2, the following clause 2.9 is added:

2.9 Continuous Improvement Program. During the TERM, the parties may elect to pursue any one or more of the cost saving measures described in further detail in Exhibit G, subject to the parties' mutual agreement on division of responsibilities and costs and the potential impact on SPECIFICATION and UNIT PRICES.

5. With reference to Clause 6.11 parties agree that:

The Technical Committee shall be composed of one representative of each party. Initially, such representatives shall be:

- for CYDEX: Mr. Vince Antle
- for HOVIONE: Mr. Antonio Gomes

The Management Committee shall be composed of one representative of each Party. Initially, such representatives shall be:

- for CYDEX: Dr. John Siebert
- for HOVIONE: Mr. David Hoffman

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

IN WITNESS WHEREOF, the parties, through their authorized representatives, have duly executed this AGREEMENT as of the date first written above.

Accepted and agreed
CYDEX, INC.

By: /s/ John M. Siebert
Name: John M. Siebert
Title: Chairman and CEO
Date: 17 Jan. 2006

HOVIONE LLC

By: /s/ David Hoffman
Name: David Hoffman
Title: President US Operations
Date: 14 Jan. 2006

Accepted and agreed:
HOVIONE FARMACIENCIA S.A.

By: /s/ Noé Carreira
Name: Noé Carreira
Title: Director
Date: 05 Jan. 2006

HOVIONE PHARMASCIENCE LIMITED

By: /s/ Carlos Costa
Name: Carlos Costa
Title: Director
Date: 3 Jan. 2006

HOVIONE INTERNATIONAL LIMITED

By: /s/ G. Villax
Name: G. Villax
Title: CEO and Director
Date: 05 Jan. 2006

EXHIBIT F

PRICING

The following unit prices remain valid as full compensation for the performance of HOVIONE hereunder for the manufacture and supply of CAPTISOL from its Loures site from and after the COMMERCIAL PRODUCTION DATE, unless altered based on the Agreement as a result of the issues foreseen in the AGREEMENT that have or could occur by the [***] of the COMMERCIAL PRODUCTION DATE. CYDEX shall pay HOIVONE the following supply prices ("UNIT PRICES") tor CAPTISOL:

Quantities of CAPTISOL® Supplied in a CONTRACT YEAR	UNIT PRICES (US$)
[***]	[***]
[***]	[***]
[***]	[***]

[***]

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

EXHIBIT G

CONTINUOUS IMPROVEMENT PLAN

[***]

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

Exhibit 10.102

2nd Amendment to the

CAPTISOL® SUPPLY AGREEMENT
dated as of
December 20, 2002 and amended July 29, 2005

BY AND BETWEEN

CYDEX, INC.

AND

THE HOVIONE GROUP

Dated as of March 1, 2007

2ND AMENDMENT TO THE CAPTISOL® SUPPLY AGREEMENT

THIS 2ND AMENDMENT TO THE CAPTISOL SUPPLY AGREEMENT (the "Agreement") is entered into as of March 1, 2007, by and between:

(1) **CYDEX, INC.,** a Delaware corporation with an office at 10513 W. 84th Terrace, Lenexa, Kansas, 66214 ("Cydex"), and

(2) **HOVIONE LLC,** a New Jersey limited liability company with an office at 40 Lake Drive, East Windsor, New Jersey, 08250 ("Agent"), acting as exclusive sales agent for the USA for the manufacturers, **HOVIONE FARMACIENCIA S.A.,** a Portuguese corporation ("Hovione SA"), and **HOVIONE PHARMASCIENCE LIMITED,** a Macau corporation ("Hovione limited"), and acting as exclusive sales agent for the project manager **HOVIONE INTERNATIONAL LIMITED,** a Hong Kong corporation with an office at 172 Gloucester Road, Wanchai, Hong Kong ("Hovione International"), jointly and severally. Agent, Hovione SA, Hovione limited, and Hovione International are collectively referred to herein as "Hovione").

This 2nd Amendment to the Captisol Supply Agreement is hereafter referred to as the "Amendment No. 2".

BACKGROUND

Both parties declare that the original intent of the Agreement entered into has been and remains valid. The parties desire to amend the Agreement to clarify that Hovione has neither used nor will use any debarred or convicted person in the performance of its obligations under the Agreement.

AGREEMENTS

NOW, THEREFORE, in consideration of the mutual promises hereinafter made and the mutual benefits to be derived from this Amendment No. 2, and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

1. **Definitions**. All capitalized terms used herein shall have the meaning given to them in the Agreement, unless otherwise defined herein.

2. **Amendment to Section 8.2**. Section 8.2 of the Agreement is hereby amended to add a new subclause (v) that read as follows:

"(v) In addition to the foregoing, HOVIONE warrants and represents to CYDEX that it has not nor will it use in any capacity the services of any persons debarred or convicted under 21 U.S.C. Section 335(a) or 335(b) in manufacturing and supplying CAPTISOL."

3. **Governing Law**. This Amendment No. 2 shall be construed in accordance with the laws of the State of Delaware in the United States of America, without giving effect to the principles of conflicts of law thereof.

4. **Continuing Effect**. Nothing in this Amendment No. 2 is meant to subvert or otherwise alter the rights and obligations of either Hovione or CyDex under the Agreement, except as and to the extent expressly stated herein.

5. **Counterparts**. This Amendment No. 2 may be executed in multiple counterparts, each of which shall be an original as against any party whose signature appears thereon but each of which together shall constitute one and the same instrument.

Signature Page to Follow

IN WITNESS WHEREOF, the parties, through their authorized representatives, have duly executed this Amendment No. 2 as of the date first written above.

CyDec, Inc.

By: /s/ Allen K. Roberson
Name: Allen K. Roberson
Title: Vice President
Date: March 5, 2007

Hovione LLC

By: /s/ David P. Hoffman
Name: David P. Hoffman
Title: President U.S. Operations
Date: 09 Mar. 2007

Hovione Farmaciencia S.A.

By: /s/ Noé Carreira
Name: Noé Carreira
Title: Director
Date: 12 March 2007

Hovione Pharmascience Limited

By: /s/ Luis Gomes
Name: Luis Gomes
Title: General Manager
Date: Taizhou 9 March 07

Hovione International Limited

By: /s/ G. Villax
Name: G. Villax
Title: Chief Executive
Date: 9 March 2007

Exhibit 10.103

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

3rd Amendment to the

CAPTISOL® SUPPLY AGREEMENT
dated as of
December 20th, 2002 and amended July 29, 2005 and March 1, 2007

BY AND BETWEEN

CYDEX, INC.

AND

THE HOVIONE GROUP

Dated as of January 28, 2008

3rd AMENDMENT TO THE CAPTISOL® SUPPLY AGREEMENT

THIS 3rd AMENDEMENT TO THE CAPTISOL SUPPLY AGREEMENT (the "AGREEMENT") is entered into as of January 28, 2008, by and between:

(1) **CYDEX, INC.,** a Delaware corporation with an office at 10513 W. 84th Terr, Lenexa, Kansas, 66214 ("CYDEX"); and

(2) **HOVIONE LLC**, a New Jersey limited liability company with an office at 40 Lake Drive, East Windsor, New Jersey 08250 ("AGENT"), acting as exclusive sales agent for the USA for the manufacturers, **HOVIONE FARMACIENCIA S.A.**, a Portuguese corporation ("HOVIONE SA"), and **HOVIONE PHARMASCIENCE LIMITED**, a Macau corporation ("HOVIONE LIMITED"), and acting as exclusive sales agent for the project manager **HOVIONE INTERNATIONAL LIMITED**, a Hong Kong corporation with an office at 172 Gloucester Road, Wanchai, Hong Kong ("HOVIONE INTERNATIONAL"), jointly and severally. AGENT, HOVIONE SA, HOVIONE LIMITED and HOVIONE INTERNATIONAL are collectively referred to herein as "HOVIONE").

This 3rd Amendment to the Captisol Supply Agreement is hereafter referred to as the "Amendment No. 3".

BACKGROUND

Both parties declare that the original intent of the AGREEMENT entered into has been met and remains valid. The parties feel that it is appropriate to clarify and update certain terms set forth in the AGREEMENT. Specifically, the parties have agreed to [***] the minimum annual purchase requirement of Captisol, to remove the obligation of HOVIONE to hold additional inventory, to grant HOVIONE rights to practice under a certain patent, and to clarify how certain exchange rates should be determined and applied.

AGREEMENTS

NOW, THEREFORE, in consideration of the mutual promises hereinafter made and the mutual benefits to be derived from this Amendment No. 3, and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions. All capitalized terms used herein shall have the meaning given to them in the AGREEMENT, unless otherwise defined herein.

2. Amendment to Article I (Definitions). The following term has been amended to read in its entirety:

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

""INITIAL TERM" means the period commencing upon the EFFECTIVE DATE and ending on March 31, 2014."

3. Amendment to Section 3.5 (Forecasts, Purchase Orders and Minimum Orders). Section 3.5 is hereby amended to change the minimum annual purchase requirement from a minimum of [***]to [***]. As amended, Section 3.5 shall read in its entirety:

"3.5 FORECASTS, Purchase Orders and Minimum Quantities. Within [***]) days after the commencement of any CONTRACT YEAR, CYDEX shall provide HOVIONE with a written [***] forecast of its anticipated purchase order for commercial quantities of CAPTISOL for the subsequent [***] ("FORECAST"), specifying quantities and delivery dates. Not later than [***] months in advance of such CONTRACT YEAR, CYDEX shall be required to place its irrevocable purchase order for [***] % of the aggregate quantities of CAPTISOL specified in its FORECAST, provided that CYDEX shall have the right, with respect to not more than [***] % of FORECASTED quantities, to (i) [***] such FORECASTED quantities, and/or (ii) [***] among deliveries scheduled and new delivery dates, provided in aggregate the changed amounts are not disproportionately concentrated in time thereby causing HOVIONE to produce and deliver in that period in excess of the [***]% its obligations. CYDEX's irrevocable purchase order shall be for at least [***]. HOVIONE shall confirm acceptance of such annual irrevocable purchase order within [***] days of receipt. Should CYDEX desire to make additional changes in quantities and/or delivery dates, CYDEX shall notify HOVIONE and HOVIONE will use its best commercial efforts to accommodate CYDEX's requests."

4. Deletion of Section 3.7 (Additional Inventory). The parties agree that HOVIONE is not required to manufacture and hold in inventory an additional quantity of CAPTISOL equal to [***]% of the quantities specified by CYDEX in each of its purchase orders. Accordingly, Section 3.7 of the AGREEMENT is hereby deleted in its entirety.

5. Amendment to Section 4.1 (Initial UNIT PRICES). Section 4.1 is hereby amended to read in its entirety:

"4.1 Initial UNIT PRICES. As full compensation for the performance of HOVIONE hereunder for the manufacture and supply of CAPTISOL from its Loures site from and after the COMMERCIAL PRODUCTION DATE, CYDEX shall pay HOVIONE the following supply prices ("UNIT PRICES") for CAPTISOL:

Quantities of CAPTISOL Supplied in a CONTRACT YEAR	UNIT PRICES (US$)
[***]	[***]

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

For supplies in excess of [***] CYDEX shall pay HOVIONE the following supply prices ("UNIT PRICES") for CAPTISOL, till a minimum price of $ [***]

Price = [***]

e.g.: for a supply of [***]

Such UNIT PRICES shall be adjusted only as provided in Section 4.2 hereof. An estimated UNIT PRICE for deliveries of CAPTISOL to be used for all invoices in a given CONTRACT YEAR shall be based on the purchase order for such CONTRACT YEAR. Within [***] days following the end of each CONTRACT YEAR, CYDEX shall submit to HOVIONE a reconciliation of the total amount that should have been paid by CYDEX for all quantities of CAPTISOL purchased during such CONTRACT YEAR in accordance with the actual UNIT PRICE against the total amounts actually billed by HOVIONE and paid for by CYDEX for such quantities based on the estimated UNIT PRICE for such year. If such reconciliation shows that CYDEX has overpaid for such purchases, then HOVIONE shall, upon [***] days' notice, at CYDEX's election, either refund such overpayment or credit such overpayment against future purchases of CAPTISOL. If such reconciliation shows that CYDEX has underpaid for such purchases, then CYDEX shall remit the balance so determined to be due to HOVIONE within [***] [***] days of its submission of such reconciliation. Such UNIT PRICES include all raw materials, conversion costs and delivery costs (other than customs duties, if any, in the country where CAPTISOL is to be delivered as directed by CYDEX)."

6. Amendment to Section 6.11 (Relationship Management). The representatives to the Technical Committee and the Management Committee shall be amended to be as follows:

"The Technical Committee shall be composed of one representative of each party. Initially, such representatives shall be:

- For CyDex: Dr. Vincent Antle
- For Hovione: Mr. Pedro Duarte"

"The Management Committee shall be composed of one representative of each party. Initially, such representatives shall be:

- For CyDex: Mr. Allen Roberson
- For Hovione: Mr. David Hoffman"

7. Amendment to Section 7.2 (Proprietary Rights). Section 7.2 is hereby amended to add a new subclause (f) that shall read in its entirety:

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

"(f) License Under U.S. Patent No. [***]. CYDEX hereby grants HOVIONE a limited, nonexclusive license, without the right to sublicense, under U.S. Patent No. [***] solely to manufacture CAPTISOL pursuant to this AGREEMENT.

For the avoidance of doubt, HOVIONE shall not have any rights under U.S. Patent No. [***] outside the scope of the license granted herein."

8. Amendment to Section 8.2(v). Section 8.2(v) is hereby amended to read in its entirety:

"(v) In addition to the foregoing, HOVIONE warrants and represents to CYDEX that it has not, nor will it, use in any capacity the services of any person (1) debarred or suspended under 21 U.S.C. Sections 335(a) or 335(b) or (2) debarred or suspended pursuant to any other federal, state or foreign regulatory authority which has jurisdiction over HOVIONE's operations or products.

9. Amendment to Exhibit D Subsection 4 (Threshold). Subsection 4 of Exhibit D is hereby amended to read in its entirety:

"Threshold. Following the last date of release by HOVIONE to CYDEX of a commercial campaign of CAPTISOL, the parties shall refer to the exchange rate for U.S. Dollars to Euro as reported by the *Wall Street Journal*, Eastern U.S. edition on the date (or the next business day if such date is on a weekend or holiday). Such exchange rate shall be referred to as the ACTUAL EXCHANGE RATE. In the event that the ACTUAL EXCHANGE RATE for the US. Dollar to the Euro deviates by more than [***] percent ([***]%) [***] from the REFERENCE EXCHANGE RATE (as determined by subtracting the ACTUAL EXCHANGE RATE from the REFERENCE EXCHANGE RATE and then taking the result and dividing it by the REFERENCE EXCHANGE RATE), then the UNIT PRICES for such commercial campaign batch of CAPTISOL released by HOVIONE to CYDEX shall be proportionately adjusted as described in Subsection 5 of this Exhibit D. The parties hereby agree that they anticipate adjusting the UNIT PRICES for currency exchange rate deviations no more than [***] a CONTRACT YEAR. If currency exchange rate deviations cause the UNIT PRICES to be adjusted more frequently than [***] in a given CONTRACT YEAR, then the parties shall negotiate in good faith whether this Subsection 4 of this Exhibit D should be further amended.

By way of example, if the last date of release of a commercial campaign batch of CAPTISOL was released by HOVIONE to CYDEX on January 15 of a given CONTRACT YEAR, then the parties would refer to the exchange rate for U.S. Dollars to Euro as reported by the *Wall Street Journal*, Eastern U.S. edition on January 15 of such CONTRACT YEAR (or the next business day if such date was on a weekend or holiday). If such ACTUAL EXCHANGE RATE differed from the REFERENCE EXCHANGE RATE by more than [***] percent ([***]%), then the UNIT PRICES for such

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

commercial campaign batch would be adjusted according to Subsection 5 of this Exhibit D."

10. Amendment to Exhibit D Subsection 5 (Calculations). Reference to "for the new CONTRACT YEAR" in the second line of Subsection 5 of Exhibit D is hereby deleted. For the avoidance of doubt, but subject to the limitation of frequency described in Subsection 4 of Exhibit D, an ADJUSTMENT FACTOR shall be calculated after each release by HOVIONE to CYDEX of a commercial campaign batch of CAPTISOL.

11. Governing Law. This Amendment No. 3 shall be construed in accordance with the laws of the State of Delaware in the United States of America, without giving effect to the principles of conflicts of law thereof.

12. Continuing Effect. Nothing in this Amendment No. 3 is meant to subvert or otherwise alter the rights and obligations of either HOVIONE or CYDEX under the AGREEMENT, except as and to the extent expressly stated herein.

13. Counterparts. This Amendment No. 3 may be executed in multiple counterparts, each of which shall be an original as against any party whose signature appears thereon but each of which together shall constitute one and the same instrument.

Signature Page to Follow

IN WITNESS WHEREOF, the parties, through their authorized representatives, have duly executed this Amendment No. 3 as of the date first written above.

CYDEX, INC.

By: /s/ Allen K. Roberson
Name: Allen K. Roberson
Title: Chief Financial Officer
Date: 5 February 2008

HOVIONE LLC

By: /s/ David Hoffman
Name: David Hoffman
Title: President-US Operations
Date: 4 Feb 2008

HOVIONE FARMACIENCIA S.A.

By: /s/ Noé Carreira
Name: Noé Carreira
Title: Director
Date: 25 Jan. 2008

HOVIONE PHARMASCIENCE LIMITED

By: /s/ G. Villax
Name: G. Villax
Title: Chief Executive
Date: 25 Jan. 2008

HOVIONE INTERNATIONAL LIMITED

By: /s/ G. Villax
Name: G. Villax
Title: Chief Executive
Date: 25 Jan. 2008

[HOVIONE LOGO]

Exhibit 10.104

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

Hovione FarmaCiencia SA
Sete Casas
2574-506 Loures
Portugal

October 04, 2009

4th Amendment to the

CAPTISOL SUPPLY AGREEMENT

Dated as of

December 20th, 2002 and amended July 29, 2005,

March 1, 2007 and January 28, 2008

BY AND BETWEEN

CYDEX PHARMACEUTICALS, INC.

AND

THE HOVIONE GROUP

Dated as of September 23, 2009

4th AMENDMENT TO THE CAPITSOL SUPPLY AGREEMENT

This 4th amendment to the Captisol Supply Agreement (the "AGREEMENT") is entered into as of September 23, 2009, by and between:

1) **CYDEX PHARMACEUTICALS, INC**., A Delaware Corporation with an office at 10513 W. 84th Terrace, Lenexa, KS 66214 ("CYDEX"), formerly known as "CyDex, Inc."; and

2) **HOVIONE, LLC**, a New Jersey limited liability company with an address at 40 Lake Drive, East Windsor, NJ 08520 ("AGENT), acting as exclusive sales agent for the USA for the manufacturers, **HOVIONE FARMACIENCIA, S.A**., a Portuguese Corporation ("HOVIONE SA"), and **HOVIONE PHAMASCIENCE LIMITED**, a Macau Corporation ("HOVIONE LIMITED"), and acting as exclusive sales agent for the project manager **HOVIONE INTERNATIONAL LIMITED**, an Hong Kong Corporation with an office at 172 Gloucester Road, Wanchai, Hong Kong ("HOVIONE INTERNATIONAL"), jointly and severally, AGENT, HOVIONE SA, HOVIONE LIMITED, and HOVIONE INTERNATIONAL are collectively known as ("HOVIONE").

This 4th Amendment to the Captisol Supply Agreement is hereafter referred to as "Amendment No. 4".

BACKGROUND

Both parties declare that the original intent of the AGREEMENT entered into has been and remains valid. The parties feel that it is in the best interests of both parties to clarify and update certain terms set forth in the AGREEMENT. Specifically the parties have agreed to the terms and conditions related to reimbursing to CYDEX the original Loures Engineering Services costs for the Captisol program, clarify invoicing procedures and extending the current term of the AGREEMENT.

AGREEMENTS

NOW, THEREFORE, in consideration of the mutual promises hereinafter made and the mutual benefits derived from this Amendment No. 4, and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties hereto, intend to be legally bound, hereby agree to as follows:

1. **Definitions**: All capitalized terms used herein shall have the meaning given to them in the AGREEMENT, unless otherwise defined herein.

2 **Amendment to Article 1 (Definitions)**. The following term has been amended to read in its entirety:

""INITIAL TERM" means the period commencing upon the EFFECTIVE DATE and ending on December 31, 2019."

3. **Amendment to Section 4.2 h (Adjustments to UNIT PRICES for Reimbursement for Loures Engineering Services)**. Section 4.2 h is hereby amended to read in its entirety:

"4.2 (h) Reimbursement for Loures Engineering Services. Commencing on the 1st of January, 2010, HOVIONE will [***] the UNIT PRICES of CAPTISOL by [***] of CAPTISOL purchased by CYDEX from HOVIONE. This [***] will apply to all CAPTISOL purchased after the 1st of January, 2010 up to [***] of CAPTISOL purchased or on March 31st, 2014 irrespective of the quantity purchased. Once the total amount of [***] have been purchased or the period of time for the said reimbursement expires, namely: on March 31st, 2014, the reimbursement shall expire and the UNIT PRICES will return to the standard calculation as outlined in Amendment No. 3 executed on the 28th January, 2008."

4. **Amendment to Section 4.3 (Payment)**. The following sentence shall be inserted as the third sentence of Section 4.3 of the AGREEMENT:

"For clarity, HOVIONE shall not issue invoices for CAPTISOL prior to the date of actual shipment of CAPTISOL by HOVIONE for deliveries to CYDEX to fulfill CYDEX's purchase orders, even if HOVIONE has earlier released the relevant quantities of CAPTISOL for quality control purposes unless agreed to in writing by both CYDEX and HOVIONE."

5. **Governing Law**. This Amendment No. 4 shall be construed in accordance with the laws of the State of Delaware in the United States of America, without giving effect to the principles of conflicts to the laws thereof.

6. **Continuing Effect**. Nothing in the Amendment No. 4 is meant to subvert or otherwise alter the rights and obligations of either HOVIONE or CYDEX under the AGREEMENT, except as and to the extent expressly stated herein.

7. **Counterparts**. This Amendment No. 4 may be executed in multiple counterparts, each of which shall be an original as against a party whose signature appears thereon but each of which together shall constitute one and the same instrument.

Signature Page to Follow

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

IN WITNESS WHEREOF, the parties, through their authorized representatives, have duly executed this Amendment No. 4 as of the date first written above.

CyDex Pharmaceuticals, Inc.
By: /s/ Theron E. Odlaug
Name: Theron E. Odlaug
Title: Pres. & CEO
Date: Sept. 18, 2009

Hovione, LLC
By: /s/ David Hoffman
Name: David Hoffman
Title: VP EX & PD Business Units
Date: 18 Sept. 2009

Hovione Farmaciencie, S.A.
By: /s/ Noé Carreira
Name: Noé Carreira
Title: VP-Manufacturing
Date: Lisbon 30/Sep/2009

Hovione Pharmascience Limited
By: /s/ Jorge Pasticha
Name: Jorge Pasticha
Title: General Manager — Macau Plant
Date: Macau, 06 Oct. 2009

Hovione International Limited
By: /s/ G. Villax
Name: G. Villax
Title: Chief Executive
Date: Princeton, 23 Sept. 2009

Exhibit 10.105

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

LICENSE AGREEMENT

THIS LICENSE AGREEMENT is made and entered into this 3rd day of September, 1993 by and between **THE UNIVERSITY OF KANSAS** ("KU"), a not for profit Kansas corporation having offices at 226 Strong Hall, Lawrence, Kansas 66045, and **CyDex L.C.** ("CyDex"), a Kansas limited liability company having an office at 8675 W. 96th Street, Suite 207, Overland Park, Kansas 66212.

WITNESSETH:

WHEREAS, KU is the assignee and owner of US Patent No. [***] and foreign counterparts all of which claim [***] ("KUCD"); and

WHEREAS, CyDex wishes to commercialize the KUCD as an excipient in pharmaceutical products to third parties and develop nonpharmaceutical applications; and

WHEREAS, CyDex represents that it has the know-how, wherewithal, intent and desire to commercialize the KUCD; and

WHEREAS, KU wishes to grant CyDex a commercial license with express rights to sublicense with respects to such commercialization and development; and

WHEREAS, KU wishes to assign to CyDex a pending agreement which, if executed, adds both technical and commercial value to the KUCD; and

WHEREAS, CyDex is desirous of obtaining a commercial license from KU for the KUCD and assignment of the Pfizer Licenses.

NOW, THEREFORE, the parties agree as follows:

1. DEFINITIONS. Capitalized terms used in this Agreement, not otherwise defined in its text, shall have the following meanings:

1.1 "Patent Rights" shall mean

(a) US Patent No. [***] and any division, continuation-in part, renewal, patent of addition, extension, reissue or foreign counterpart thereof; and

(b) all patentable inventions claiming KUCD only or improvements to KUCD only including all patent applications, whether domestic or foreign, claiming such patentable inventions, including all continuations, continuations-in-part, divisions,

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renewals and patents of addition thereof, all letters patent granted thereon, and reissues and extensions thereof.

1.2 "Valid Claim" shall mean either

(a) a claim of an issued and unexpired patent included within KU's Patent Rights which has not been held unenforceable, unpatentable or invalid by a decision of a court or governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which has not been admitted to be invalid or unenforceable through reissue or disclaimer or otherwise; or

(b) a claim of a pending patent application included within KU's Patent Rights.

1.3 "Pfizer Licenses" shall mean the pending agreements reached between Pfizer and KU which grant Pfizer research licenses and options for commercial licenses to the Patent Rights. An executed copy of the Pfizer Licenses shall be attached to this Agreement.

1.4 "…subject to…" shall mean

(a) this Agreement recognizes the grant of a research license and options to commercial licenses covering the Patent Rights within the Pfizer Licenses; and

(b) that the Pfizer Licenses provide an exclusive right to make, use and sell KUCD with pharmaceutical products indicated for use in the treatment and prophylaxis of fungal infections in humans; and

(c) that the Pfizer Licenses grant Pfizer a non-exclusive option to a non-exclusive worldwide license, within certain terms and conditions, to make, use or sell KUCD with known Pfizer compounds or new chemical entities discovered or obtained by Pfizer for use in humans except for use in ophthalmic and nasal formulations.

2. GRANT

2.1 [***].

2.2 [***].

2.3 CyDex and KU acknowledge that KU's right to grant the License may be subject to the provisions of 35 United States Code Sections 200 – 212, inclusive, and regulations promulgated pursuant to those Sections.

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

3. TERM

3.1 Except as otherwise provided herein, the License granted in paragraph 2.1 shall commence upon the date of its execution until the date of expiration of the last to expire of any patents included in KU's Patent Rights.

4. SUBLICENSES

4.1 KU also grants to CyDex the right to issue sublicenses with respect to the License granted in paragraph 2.1. These sublicenses shall be in conformance with and extend to protect all of the rights and obligations due KU that are contained in this Agreement. It is understood that CyDex's sublicensees shall not be required to pay a license issue fee or minimum annual royalties directly to KU.

4.2 CyDex shall provide KU with a copy of each sublicense issued hereunder and shall take all reasonable steps to collect all royalties due KU from sublicensees and shall collect and deliver all reports due KU from sublicensees.

4.3 Upon termination of this Agreement for any reason, KU agrees to negotiate in good faith a license with each of CyDex's sublicensees, such license to contain terms as follows if such terms are consistent with the principal elements of this Agreement:

(a) financial terms no less favorable than the terms of the sublicense with CyDex;

(b) rights under KU's Patent Rights to the same extent as the rights granted the sublicensee under the sublicense with CyDex;

(c) rights of and obligations to KU consistent with KU's License with CyDex; and

(d) the conditions of subparagraph 4.3(c) shall prevail should such conditions conflict with those of subparagraph(s) 4.3(a) and/or 4.3(b).

5. TECHNICAL ASSISTANCE

5.1 [***].

5.2 CyDex shall maintain the Drug Master File for KUCD. KU and CyDex shall have free access to and will be free to use the data for any and all purposes subject to the terms and conditions of this Agreement.

6. LICENSE ISSUE FEE

6.1 For the License acquired under paragraph 2.1 above, covering KU's Patent Rights, CyDex shall pay to KU a License Issue Fee consisting of [***].

6.2 KU agrees that in addition to the License grant under paragraph 2.1 above, KU shall assign the Pfizer Licenses to CyDex as further consideration for the License Issue Fee of paragraph 6.1.

6.3 In the event the Pfizer Licenses are terminated, the License grant under paragraph 2.1 shall not result in any dimunition of [***].

6.4 In the event the Pfizer Licenses are not executed by [***], KU and CyDex agree to renegotiate this License in good faith based upon the then current circumstances.

7. ROYALTIES

7.1 [***]

(a) [***]

(b) [***]

(c) [***]

(d) [***]

7.2 [***]

7.3 [***]

(a) [***]

(b) [***]

(c) [***]

8. DUE DILIGENCE

8.1 CyDex agrees that it or its sublicensees shall diligently proceed with development and implementation of a plan to exploit KU's Patent Rights.

8.2 CyDex shall be entitled to exercise prudent and justifiable business judgment in meeting its due diligence obligations, including exercising the right to delay, suspend or terminate development or marketing of a product under the License if any event or condition exists, such as but not limited to: the advisability of further laboratory development or additional clinical studies, a regulatory action affecting such product under License or the existence of an issue relating to the safety or efficacy of such product under License, that would suggest to a reasonable person that development or marketing of such product under License should be delayed, suspended or terminated.

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

9. PATENT PROSECUTION AND MAINTENANCE

9.1 Unless otherwise agreed upon, KU and CyDex shall diligently prosecute and maintain all patent applications and patents included in KU's Patent Rights using counsel of their choice and after due consultation with the other party. Each party shall provide the other with copies of all relevant documentation on a confidential basis so that each party may be informed and appraised of the continuing prosecution and maintenance. CyDex shall be responsible for the payment of expenses related to the prosecution and maintenance of KU's Patent Rights. It is intended by both parties that CyDex will provide advice and counsel concerning patent strategy.

9.2 Unless otherwise agreed upon, CyDex agrees to pay its pro rata share of filing and maintenance fees in those countries in which KU files or maintains Patent Rights at CyDex's request. This pro rata share will be based upon the then identified parties obligated to share in the pro rata share of the filing and maintenance fees.

10. INFRINGEMENT

10.1 When information comes to the attention of CyDex or KU that any of the rights granted by this Agreement or the License has been or is threatened to be unlawfully infringed, KU shall have the right at its expense to take such action as it may deem necessary to prosecute or prevent such unlawful disclosure or infringement, including the right to bring or defend any suit, action or proceeding involving such suit, action, or proceeding, if appropriate. If KU does not, within [***] days after giving or receiving notice to CyDex of the above-described information, notify CyDex of KU's intent to bring suit against any infringer, CyDex shall have the right to bring suit for such alleged infringement, but it shall not be obligated to do so, and may join KU as party plaintiff, if appropriate, in which event CyDex shall hold KU free, clear and harmless from any and all costs and expenses of such litigation, including attorney's fees, and any sums recovered in any such suit or in its settlement shall belong to CyDex. However, [***] percent ([***]%) of any such sums received by CyDex, after deduction of the costs and expenses of litigation, including attorney's fees paid, shall be paid to KU. Each party shall have the right to be represented by the counsel of its own selection and at its own expense in any suit instigated by the other for infringement, under the terms of this Paragraph. If CyDex lacks standing to bring any such suit, action or proceeding, then KU shall do so at the request of CyDex and at CyDex's expense.

10.2 KU will cooperate with CyDex at CyDex's expense in the defense of any suit, action or proceeding against CyDex or any sublicensee of CyDex alleging the infringement of the intellectual property rights of a third party by reason of the use of Patent Rights in the manufacture, use or sale of any product under License. CyDex shall give KU prompt written notice of the commencement of any such suit, action or proceeding or claim of infringement and will furnish KU a copy of each communication relating to the alleged infringement. If the parties agree that KU should institute or join any suit, action or proceeding pursuant to this Section, CyDex may join KU as a defendant if necessary or desirable, and KU shall execute all

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documents and take all other actions, including giving testimony, which may reasonably be required in connection with the prosecution of such suit, action or proceeding.

11. TERMINATION

11.1 It is expressly agreed that if CyDex should fail to deliver to KU any statement or report when due, or fail to pay any royalty at the time that the same should be due or if CyDex should violate or fail to perform any covenant, condition, or undertaking of this Agreement on its part to be performed hereunder, then and in such event KU may give written notice of such default to CyDex. If CyDex should fail to repair such default within [***] days from such notice, KU shall have the right to terminate this agreement and the License by written notice to CyDex. Upon such notice of termination to CyDex, this Agreement shall automatically terminate. Such termination shall not relieve CyDex of its obligation to pay any royalty or license fees due or owing at the time of such termination and shall not impair any accrued right of KU.

11.2 CyDex may terminate this Agreement with or without cause upon [***] days notice. Such termination shall not relieve CyDex of its obligation to pay any royalty or license fees due or owing at the time of such termination and shall not impair any accrued right of KU.

12. WARRANTY BY KU

12.1 KU warrants that they have the lawful right to grant this license.

12.2 KU makes no express or implied warranties of merchantability or fitness of the KUCD for a particular purpose.

12.3 Nothing in this Agreement shall be construed as a warranty or representation by KU as to the validity or scope of KU's Patent Rights.

13. WAIVER

13.1 It is agreed that no waiver by either party hereto of any breach or default of any of the covenants or agreements herein set forth shall be deemed a waiver as to any subsequent and/or similar breach.

14. ASSIGNABILITY

14.1 This Agreement is binding upon and shall inure to the benefit of KU, their successors and assigns, but shall be personal to CyDex and assignable by CyDex only with the written consent of KU, which consent shall not be unreasonably withheld. No assignment shall relieve either party of responsibility for any crued obligation which such party has hereunder. Any permitted assignee shall assume all obligations of its assignor under this agreement.

15. COVENANTS OF KU AND CYDEX

15.1 KU shall maintain and preserve its corporate existence, rights, franchise and privileges in the jurisdiction of its incorporation, and qualify and remain qualified as a foreign

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

corporation in good standing in each jurisdiction in which such qualification is from time to time necessary or desirable in view of their business operations or the ownership of their properties.

15.1.1 CyDex shall maintain and preserve its status under the Kansas Limited Liability Company Act.

15.2 Both parties shall comply in all material respects with the requirements of all applicable laws, rules, regulations and orders of any government authority to the extent necessary to perform its obligations under this Agreement, except for those laws, rules, regulations, and orders it may be contesting in good faith.

16. NOTICES

16.1 All notices shall be in writing mailed via certified mail, return receipt requested, courier, or facsimile transmission addressed as follows, or to such other address as may be designated from time to time:

If to CyDex:

Manager
CyDex, L.C.
8675 W. 96th St., Suite 207
Overland Park, KS 66212

If to KU:

General Counsel
University of Kansas
245 Strong Hall
Lawrence, KS 66045

Notice shall be deemed given as of the date sent.

17. INDEMNIFICATION

CyDex shall at all times during the term of this License and thereafter indemnify, defend and hold KU and its trustees, officers and employees harmless from and against any and all claims, proceedings, demands, losses, damages, liabilities, costs and expenses of any nature whatsoever (including without limitation reasonable attorneys' fees) arising out of or connected with the manufacture, marketing, licensing, promotion, distribution, use or sale of the KUCD or arising out of CyDex's failure to perform any obligation hereunder.

18. GOVERNING LAW

18.1 This Agreement shall be governed by and construed in accordance with the laws of the State of Kansas.

19. NON-USE OF NAMES

CyDex shall not use the name of KU in any advertising, promotional or sales literature without KU's prior written consent, except that CyDex may state that it is licensed by KU under the Patent Rights.

20. MISCELLANEOUS

20.1 Headings. Paragraph headings are inserted for convenience of reference only and do not form a part of this Agreement.

20.2 Counterparts. This Agreement may be executed simultaneously in two or more counterparts, each of which shall be deemed an original.

20.3 Amendment. This Agreement can be amended, modified, or canceled only by a written instrument executed by each party.

20.4 No Third Party Beneficiaries. No third party including any employee of any party to this Agreement, shall have or acquire any rights by reason of this Agreement. Nothing contained in this Agreement shall be deemed to constitute the parties partners with each other or any third party.

20.5 Force Majeure. Neither CyDex nor KU shall be liable for failure of or delay in performing obligations set forth in this Agreement, and neither shall be deemed in breach of its obligations, if such failure or delay is due to natural disasters or any causes reasonably beyond the control of CyDex or KU.

20.6 Severability. If any provision of this Agreement is or becomes invalid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, it is the intention of the parties that the remainder of the Agreement shall not be effected.

20.7 Kansas Open Records Act. This License is subject to the provisions of the Kansas Open Records Act, K.S.A. 45-215 et seq.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives.

UNIVERSITY OF KANSAS	CYDEX, L.C.
By: /s/ [Illegible]	By: /s/ [Illegible]
Title: Vice Chancellor	Title: President & Manager
Date: 9/3/93	Date: 8/24/93

Exhibit 10.106

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

CD CyDex, Inc.

February 24, 1998

Ms. Victoria Thomas
General Counsel
University of Kansas
245 Strong Hall
Lawrence, KS 66045

Dear Ms. Thomas:

The letter shall serve as an amendment to the license agreement between CyDex, Inc. and the University of Kansas dated September 3, 1993.

Section 7.1(c) is modified as follows:

(c) [***]; and

New Section 7.1(e) added:

(e) [***].

The above two amendments shall be effective upon execution by their duly authorized representatives.

UNIVERSITY OF KANSAS		CyDex, Inc.	
By:	/s/ [Illegible]	By:	/s/ [Illegible]
Title:	Associate Vice Chancellor	Title:	Vice President Corporate Development
Date:	February 25, 1998	Date:	Feb. 24, 1998

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

Exhibit 10.107

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

SECOND AMENDMENT TO LICENSE AGREEMENT

THIS SECOND AMENDMENT TO LICENSE AGREEMENT (the "**Amendment**") is made and entered into this 4th day of August, 2004 (the "**Amendment Date**") by and between **THE UNIVERSITY OF KANSAS** ("**KU**"), having offices at Youngberg Hall, 2385 Irving Hill Road, Lawrence, Kansas 66044, and **CyDex, Inc.** ("**CyDex**"), a Delaware corporation having an office at 12980 Metcalf Avenue, Suite 470, Overland Park, Kansas 66213.

WHEREAS, KU and CyDex are parties to that certain License Agreement dated September 3, 1993 as amended on February 25, 1998 (the "**License Agreement**") and the patent assignments dated December 11, 1997, December 1, 1999 and March 7, 2002 (the "**Patent Assignments**"), pursuant to which KU licensed to CyDex, on an exclusive basis, certain intellectual property controlled by KU in exchange for the right to receive certain payments;

WHEREAS, pursuant to the letter from CyDex to KU dated July 6, 2004 (the "**Buy-Out Letter**"), the parties agreed to the purchase by CyDex of the remaining and future payment obligations owed under the License Agreement and Patent Assignments;

WHEREAS, the parties now desire to amend the License Agreement to clarify the patent rights that are the subject of the License Agreement and to reflect the parties' agreement regarding the elimination of the payment terms under the License Agreement and Patent Assignments; and

WHEREAS, the parties desire to amend the License Agreement and Patent Assignments to clarify KU's ownership of KUCD Improvements and CyDex's option rights with respect to KUCD Improvements.

NOW, THEREFORE, in consideration of the foregoing premises and the covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, KU and CyDex hereby agree as follows:

1. Consideration. In consideration of the rights granted to CyDex hereunder (including, without limitation, the amendments to the License Agreement made hereunder), CyDex agrees to issue to the University of Kansas Center for Research, Inc. ("KUCR"): (a) separate payments of [***] Dollars [***] and [***] Dollars [***] in cash, payable on the Amendment Date; and (b) [***] Dollars [***] in CyDex Series A-I Preferred Stock, issued pursuant to a Stock Purchase Agreement between CyDex and KUCR of even date herewith (the "**Buyout Payment**").

2. Patent Rights Definition. Section 1.1 of the License Agreement, is deleted in its entirety and replaced with the following:

1.1 "Patent Rights" shall mean:

(a) U.S. Patent No. [***] (entitled [***]);

(b) U.S. Patent No. [***] (entitled [***]);

(c) U.S. Patent No. [***] (entitled [***]);

(d) U.S. Patent No. [***] (entitled [***]);

(e) U.S. Patent No. [***] (entitled [***]); and

(f) Pending application for U.S. Patent, Serial No. [***] (entitled [***]), including continuations or divisionals thereof, and all letters patent granted thereon.

The term "Patent Rights" includes any continuations, divisions, renewals, patents of addition, reissues, extensions and foreign counterparts of any of the foregoing.

3. KUCD Improvements Definition. Article 1 of the License Agreement is amended to add the following Section 1.5:

1.5 "KUCD Improvements" shall mean:

(a) any patented inventions claiming improvements to KUCD only created after the Amendment Date resulting from research sublicenses granted by KU either prior to or after the Amendment Date; and

(b) intellectual property rights relating to KUCD only and any improvements to or next generation formulations of KUCD only, including, without limitation, rights under the new provisional patent application claiming [***] (Serial No. US [***], filed [***]), but (in each case (a) and (b)) excluding those results generated through [***] from KU research sponsored and paid for by CyDex pursuant to existing research agreements between KU and CyDex (i.e., those written agreements covering the following projects and extensions to those projects: [***] and [***]) (the "CyDex Sponsored Research").

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

4. License Grant. Section 2.1 of the License Agreement is deleted in its entirety and replaced with the following:

2.1 Upon receipt of separate payments of [***] Dollars [***] and [***] Dollars [***] in cash and [***] Dollars [***] in CyDex Series A-1 Preferred Stock, issued pursuant to a Stock Purchase Agreement, KU grants to CyDex an irrevocable, fully-paid, worldwide, exclusive (even as to KU) license under all the Patent Rights and under all intellectual property rights in and to the results generated through [***] from the CyDex Sponsored Research (the "License"), subject to KU's retained rights under Section 2.2. The License includes, without limitation, the right to (a) grant sublicenses, (b) practice any method or process claimed in the Patent Rights, and (c) manufacture, use, sell, offer to sell and import any and all products claimed in the Patent Rights, including KUCD.

5. KU's Retained Rights. Section 2.2 of the License Agreement is deleted in its entirety and replaced with the following:

2.2 KU expressly retains the right to a research license under the License for noncommercial education and research purposes. KU retains the right under the License to issue research sublicenses to other academic institutions and other State of Kansas agencies for noncommercial education and research purposes. Any patentable inventions claiming KUCD Improvements resulting from the KU research license or the research sublicenses granted as permitted by this section shall be owned by KU, subject to Section 2.4.

6. CyDex Option to KUCD Improvements. Article 2 of the License Agreement is amended to add the following Section 2.4:

2.4 KU grants to CyDex the exclusive option to acquire exclusive, worldwide rights under KU's right, title and interest in and to all KUCD Improvements under terms and conditions not materially different from those in this Agreement and with commercially reasonable royalty and payment terms (the "Option"). KU shall disclose to CyDex in reasonable written detail any such KUCD Improvement after the KU technology transfer office receives notification from the inventor(s) that such KUCD Improvement has been made. CyDex shall have [***] days (the "Option Period") following receipt of such invention disclosure to exercise the Option with respect to such KUCD Improvement by delivering written notice to KU indicating that CyDex desires to exercise the Option. Upon such notice, the parties shall negotiate in good faith for a period of up to [***] days the terms of a separate license agreement between CyDex and KU under the intellectual property rights relating to the KUCD Improvement. If CyDex exercises the Option with respect to a KUCD Improvement, but no license is executed during the negotiation period, KU agrees for a period of [***] months thereafter not to enter into any agreement with a third party for a license to the KUCD Improvement on terms more favorable to such third party than the last offer made by CyDex, without first offering CyDex those more favorable terms. In the event that such an offer is made, CyDex must accept or reject the offer of more favorable terms within [***]days of the offer by KU, and if rejected, KU shall have no

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further duty to negotiate with nor any further obligations to CyDex with respect to the Option as set forth in this Section.

7. Elimination of KU Technical Assistance Obligation. Section 5.1 of the License Agreement is deleted in its entirety.

8. Elimination of Payment Obligations. Article 7 of the License Agreement is deleted in its entirety. The parties agree that on and after the Amendment Date, CyDex shall not have any obligation to make any further payments to KU, under either the License Agreement (as amended hereby) or the Patent Assignments, based upon its exercise of the License including, without limitation, [***](as defined in the License Agreement). KU acknowledges that upon payment of the Buyout Payment, CyDex has fully satisfied all amounts owed by CyDex under the License Agreement and the Patent Assignments on and prior to the Amendment Date, and KU hereby withdraws the [***].

9. Elimination of Termination Provision. Article 11 is deleted in its entirety.

10. Assignment of License Agreement. Section 14.1 is deleted in its entirety and replaced with the following:

14.1 This Agreement shall be binding upon and inure to the benefit of the respective successors and assigns of the parties hereto. CyDex may assign the Agreement and any or all of the Licenses granted hereunder to (a) its successor in interest in connection with a merger, consolidation or sale of all or substantially all of its assets to which this Agreement relates, or (b) any third party that expressly agrees to assume all of CyDex's obligations hereunder. Any permitted assignee shall assume all obligations of its assignor under this Agreement. KU may transfer to the University of Kansas Center for Research, Inc., ("KUCR"), the manager of KU intellectual property, all of KU's rights and duties under this Agreement, as well as its ownership of securities of CyDex (both those currently owned, and to be acquired pursuant to this Letter Agreement and in the future). In addition, KUCR may transfer such rights and duties, as well as ownership of securities of CyDex, to any subsidiary or future corporation having the responsibility of managing KU's intellectual property rights. Except as otherwise provided herein, the Agreement may not be assigned by either party without the express written consent of the other party, such consent not to be unreasonably withheld. No assignment shall relieve either party of responsibility for any accrued obligation that such party has hereunder.

11. Except as specifically amended by this Amendment, the terms and conditions of the License Agreement and the Patent Assignments shall remain in full force and effect. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by their duly authorized representatives as of the Amendment Date.

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THE UNIVERSITY OF KANSAS		CYDEX, INC.	
By:	/s/ James A. Roberts	By:	/s/ John M. Siebert
Name:	James A. Roberts	Name:	John M. Siebert
Title:	Vice Provost for Research	Title:	CEO

Exhibit 10.108

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

EXCLUSIVE LICENSE AGREEMENT

This License Agreement is entered into as of the 4th day of June, 1996 (the "Effective Date") by and between Pfizer Inc., a Delaware corporation. having an office at 235 East 42nd Street, New York, New York 10017 and its Affiliates ("Pfizer") and the University of Kansas, a state educational institution of the State of Kansas with a place of business at Office of Research Support and Grants Administration, Strong Hall, Lawrence, Kansas 66045 and its Affiliates ("KU") (each individually a "Party" and collectively the "Parties").

WHEREAS, KU is the assignee and owner of U.S. Patent No. [***] and foreign counterparts all of which claim [***] ("KUCD"); and

WHEREAS, Pfizer desires to obtain an exclusive license under such U.S. Patent so that Pfizer can manufacture, use and sell certain [***] Products (as hereinafter defined); and

WHEREAS, KU is willing to grant such license;

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth in this License, the Parties agree as follows:

1. Definitions

The following terms used in this License shall have the following meanings:

1.1 "Affiliate" means (a) in the case of Pfizer, any corporation or other legal entity owning, directly or indirectly, fifty percent (50%) or more of the voting capital shares or similar voting securities of Pfizer; any corporation or other legal entity fifty percent (50%) or more of the voting capital shares or similar voting rights of which is owned, directly or indirectly, by Pfizer, or any corporation or other legal entity fifty percent (50%) or more of the voting capital shares or similar voting rights of which is owned, directly or indirectly, by a corporation or other legal entity which owns, directly or indirectly, fifty percent (50%) or more of the voting capital shares or similar voting securities of Pfizer; and (b) in the case of KU, any corporation or other legal entity which is formed by KU or enters into a joint venture with KU to perform any activities related to KUCD.

1.2 [***] Product" means any pharmaceutical preparation [***]

1.3 "Licensed [***] Products" means any [***] Product, the manufacture, use or sale of which would infringe a Valid Claim within the Patent Rights in the absence of a license.

1.4 "Major Market" means [***].

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1.5 "Net Sales" means the gross amount invoiced by Pfizer or any sublicensee of Pfizer for sales to a third party or parties of [***] Products, less normal and customary trade discounts actually allowed, rebates, returns, credits, taxes the legal incidence of which is on the purchaser and separately shown on Pfizer's or any sublicensee of Pfizer's invoices and transportation, insurance and postage charges, if prepaid by Pfizer or any sublicensee of Pfizer and billed on Pfizer's or any sublicensee of Pfizer's invoices as a separate item.

1.6 "Patent Rights" means:

(a) U.S. Patent No. [***], any division, continuation, continuation-in-part, renewal, patent of addition, extension, reissue, and any foreign counterpart thereof, and

(b) rights under all other composition-of-matter, method of use and process patents and applications therefor, whether U.S. or foreign, claiming in each case KUCD only, for use as [***] [***] only, including all continuations, continuations-in-part, divisions, renewals and patents of addition, and extensions, and reissues thereof. This definition does not include rights under any patent claiming KUCD as an active ingredient, either alone or in combination with other active ingredients or excipients.

1.7 "Territory" means all countries of the world in which Patent Rights subsist.

1.8 "Valid Claim" means a claim to a composition of matter claim and in the United States only, a KUCD method of use claim within Patent Rights so long as such claim shall not have been disclaimed by both KU or Pfizer or shall not have been held invalid in a final decision rendered by a tribunal of competent jurisdiction from which no appeal has been or can be taken. By way of further explanation, a Valid Claim does not include KUCD process claims anywhere in the world and KUCD method of use claims outside the United States.

2. Grant of License, Term, Rights and Obligations

2.1 License Granted to Pfizer under the Patent Rights

KU grants to Pfizer an exclusive license, including the right to grant sublicenses, to manufacture, use and sell [***] Products in the Territory under the Patent Rights (the "License").

2.2 Term of License Grant

Unless terminated earlier as provided below, the License shall commence on the Effective Date and shall terminate in each country in the Territory on the date on which the last to expire of the Patent Rights expires.

2.3 Sublicensing Obligations

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If Pfizer grants a sublicense pursuant to Section 2, Pfizer shall guarantee that any sublicensee fulfills all of Pfizer's obligations under this License. Pfizer further agrees to incorporate in all sublicenses granted hereunder provisions similar to those contained herein at Section 3.5 (Records); Section 5 (Termination); and Section 9 (Non-Use of Names), and a confidentiality provision no less stringent than that contained in Article 10 of the Option Agreement dated December 3, 1993 between the Parties (the "Option Agreement"). Pfizer further agrees to forward to KU a copy of each sublicense agreement entered into hereunder, and a copy of all reports received by Pfizer from its sublicensees during each l2-month period.

2.4 Technical Assistance

KU shall provide to Pfizer or any sublicensee of Pfizer, at Pfizer's request and expense, any technical assistance reasonably necessary to enable Pfizer or such sublicensee to manufacture, use or sell [***] Products and to enjoy fully all the rights granted to Pfizer pursuant to this License; provided, however, that KU is reasonably capable of providing that assistance.

3. Royalties, Payments of Royalties, Accounting for Royalties, Records, Milestone Payments

3.1 Patent Rights

Pfizer shall pay KU a royalty based on the Net Sales of Licensed [***]Products. Such royalty shall be paid with respect to each country of the world from the date of the [***](the date of the invoice of Pfizer or any sublicensee of Pfizer with respect to such sale) of such Licensed [***]Product in each such country until the expiration of the last Patent Right to expire with respect to each such country and each such Licensed [***]Product. By way of explanation, Pfizer shall pay royalties pursuant to Section 3.2.2. with respect to the manufacture of Licensed [***]Products whose manufacture would infringe a Valid Claim if it were done by an unlicensed third party, such royalties to be paid on the Net Sales of such Licensed [***]Products even if the actual sale of such Licensed [***]Products would not alone infringe a Valid Claim if such sales were made by an unlicensed third party.

3.2 Royalty Rates

3.2.1 The Royalties payable under Section 3.1 above shall be at the rate set forth in Section 3.2.2; provided, however, that the Royalty rate otherwise applicable to Net Sales of [***]Products in the United States shall be reduced by [***]percent ([***]%) until such time that KU obtains a license from the National Institutes of Health to NIH's U.S. Patent No. [***]("[***]Patent") and any foreign counterparts to make, use and sell [***]with the right to sublicense to Pfizer.

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3.2.2 Pfizer shall pay a Royalty of [***] percent [***]%) of the [***] dollars ($[***] of Net Sales made in each calendar year in the United States and a royalty of [***] percent [***]%) of Net Sales in excess of [***]and a royalty of [***]%) of the [***] dollars [***] of Net Sales made in each calendar year outside the United States and a royalty of [***] percent [***]%) of any such Net Sales in excess of [***] dollars ($[***]).

3.3 Payment Dates

Royalties shall be paid by Pfizer on Net Sales within [***] days after the end of each calendar quarter in which such Net Sales are made. Such payments shall be accompanied by a statement showing the Net Sales of each [***] Product upon which Royalties are payable by Pfizer or any sublicensee of Pfizer in each country, the applicable Royalty rate for such [***] Product, and a calculation of the amount of Royalty due.

3.4 Accounting

The Net Sales used for computing the Royalties payable to KU by Pfizer shall be computed in U.S. dollars, and such Royalties shall be paid in U.S. dollars by check or other mutually acceptable means. For purposes of determining the amount of Royalties due, the amount of Net Sales in any foreign currency shall be computed by (a) converting such amount into dollars at the prevailing commercial rate of exchange for purchasing dollars with such foreign currency as quoted by Citibank in New York on the last business day of the calendar quarter for which the relevant Royalty payment is to be made by Pfizer and (b) deducting the amount of any governmental tax, duty, charge, or other fee actually paid in respect of such conversion into, and remittance of dollars.

3.5 Records

Pfizer shall keep for [***] from the date of each payment of Royalties complete and accurate records of sales by Pfizer and its sublicensees of each [***] Product for which Royalties are payable in sufficient detail to allow the accruing Royalties to be determined accurately. KU shall have the right for a period of [***] after receiving any report or statement with respect to Royalties due and payable to appoint at its expense an independent certified public accountant reasonably acceptable to Pfizer to inspect the relevant records of Pfizer to verify such report or statement. Pfizer shall make its records available for inspection by such independent certified public accountant during regular business hours at such place or places where such records are customarily kept, upon reasonable notice from KU, to verify the accuracy of the reports and payments. Such inspection right shall not be exercised more than [***] in any calendar year nor more than [***] with respect to sales in any given period. KU agrees to hold in strict confidence all information concerning royalty payments and reports, and all information learned in the course of any audit or inspection, except to the extent necessary for KU to reveal such information in order to enforce its rights under this License or if disclosure is required by law. The failure of KU to request verification of any report or statement during said [***] period

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shall be considered acceptance of the accuracy of such report, and Pfizer shall have no obligation to maintain records pertaining to such report or statement beyond said three-year period. The results of each inspection, if any, shall be binding on both parties.

3.6 Additional Payments

Pfizer shall pay KU, within [***] [***] days of the completion of each event set forth below ("Event"), the payment listed opposite that Event. Payments shall be made in U.S. dollars by check or other mutually acceptable means. Pfizer shall be obligated to make each payment only once with respect to each [***] Product affected by an Event so that the occurrence of an Event with respect to additional strengths, dosage forms or delivery modes of that [***] Product will not require Pfizer to make an additional payment with respect to that [***] Product.

1. [***]	$[***]
2. [***].	$[***]

4. Entire Agreement

The Option Agreement, the Exhibits thereto, the Confidentiality Agreements dated March 24, 1992, May 7, 1992, and July 14, 1992 between the Parties, and this License are the sole agreements with respect to the subject matter and supersede all other agreements and understandings between the Parties with respect to same. Section 2.5 and Articles 7, 8, 9, 10, 11, 12, 13, 14 and 18 of the Option Agreement are hereby incorporated as if fully set forth herein.

5. Termination of this Agreement

5.1 Pfizer may terminate this Agreement, with or without cause, upon [***] days notice to KU.

5.2 Either Party may terminate this Agreement upon material breach by the other if such material breach remains unremedied [***] days after written notice of same.

5.3 Termination of this Agreement pursuant to this Section shall not affect the status of the Option Agreement (except that the Exclusive Option thereunder shall no longer be exercisable) or the Nonexclusive License Agreement (if it is in effect at the time of termination of this Agreement), and such Agreements shall remain in full force and effect in accordance with their respective terms.

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5.4 All rights set forth in this Section shall be in addition to, and not in limitation of, any right either Party may have with respect to the other at law or in equity by virtue of any breach or default in the performance of the terms and conditions of this License.

6. Indemnification; Insurance

6.1 Pfizer shall at all times during the term of this License and thereafter indemnify, defend and hold KU and its trustees, officers, employees and Affiliates harmless from and against any and all claims, proceedings, demands, losses, damages, liabilities, costs and expenses of any nature whatsoever (including without limitation reasonable attorneys fees) arising out of or connected with the manufacture, marketing, promotion, distribution, use or sale of the [***] Products or arising out of Pfizer's failure to perform any obligation hereunder.

6.2 Pfizer agrees to insure all Products and Pfizer activities associated therewith in the same manner in which it insures any other similar Pfizer [***] products and such activities.

7. Governing Law

This License shall be governed by and construed in accordance with the laws of the State of Kansas.

8. Notices

All notices shall be in writing mailed via certified mail, return receipt requested, courier or facsimile transmission addressed as follows, or to such other address as may be designated from time to time:

If to Pfizer: To Pfizer at its address as set forth at the beginning of this License.
Attention: President, Central Research, with copy to: Office of General Counsel

If to KU: To KU at its address as set forth at the beginning of this License.
Attention: Director

Notice shall be deemed given as of the date sent.

9. Non-Use of Names

Pfizer shall not use the name of KU or of any KU employee in any advertising, promotional or sales literature without KU's prior written consent, except that Pfizer may state that it is licensed by KU under the Patent Rights.

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10. Miscellaneous

10.1 Binding Effect. This License shall be binding upon and inure to the benefit of the Parties and their respective legal representatives successors and permitted assigns.

10.2 Headings. Paragraph headings are inserted for convenience of reference only and do not form a part of this License.

10.3 Counterparts. This License may be executed simultaneously in two or more counterparts, each of which shall be deemed an original.

10.4 Amendment; Waiver. This License may be amended, modified, superseded or canceled, and any of the terms may be waived, only by a written instrument executed by each Party or, in the case of waiver, by the Party or Parties waiving compliance. The delay or failure of either Party at any time or times to require performance of any provisions shall in no manner affect the rights at a later time to enforce the same. No waiver by either Party of any condition or of the breach of any term contained in this License, whether by conduct or otherwise in any one or more instances shall be deemed to be or considered as a further or continuing waiver of any such condition or of the breach of such term or any other term of this License.

10.5 No Third Party Beneficiaries. No third party including any employee of either Party shall have or acquire any rights by reason of this License. Nothing contained in this License shall be deemed to constitute the Parties partners with each other or any third party.

10.6 Assignment and Successors. This License may not be assigned by either Party, except that each Party may assign this License and the rights and interests of such Party, in whole or in part, to any of its Affiliates. Notwithstanding the foregoing, Pfizer may assign this License to any purchaser of all or substantially all of its assets or to any successor corporation resulting from any merger or consolidation of Pfizer with or into such corporation, and KU may similarly assign this License to any successor entity.

10.7 Force Majeure. Neither Pfizer not KU shall be liable for failure of or delay in performing obligations set forth in this License if such failure or delay is due to natural disasters or any causes reasonably beyond the control of the Party failing to perform (each a “Force Majeure Event”). Upon the occurrence of any Force Majeure Event, the Party whose performance is affected thereby shall promptly give written notice of such Force Majeure Event to the other Party, and both Parties shall use all reasonable efforts to overcome such Force Majeure Event.

10.8 Severability. If any provision of this License is or becomes invalid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, it is the intention of the Parties that the remainder of the License shall not be affected.

10.9 Kansas Open Records Act. This License is subject to the provisions of the Kansas Open Records Act, K.S.A. 45-215 et seq.

IN WITNESS WHEREOF, the parties have caused this License to be executed by their duly authorized representatives.

PFIZER INC	CYDEX, L.C.
By: /s/ [Illegible]	By: /s/ [Illegible]
Title: Vice President	Title: President
Date: 22 May 1996	Date: June 4, 1996

Exhibit 10.109

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

NONEXCLUSIVE LICENSE AGREEMENT

This License Agreement is entered into as of the 4th day of June, 1996 (the "Effective Date") by and between Pfizer Inc., a Delaware corporation having an office at 235 East 42nd Street, New York, New York 10017 and its Affiliates ("Pfizer"), and the University of Kansas, a state educational institution of the State of Kansas with a place of business at Office of Research Support and Grants Administration, Strong Hall, Lawrence, Kansas 66045 and its Affiliates ("KU") (each individually a "Party" and collectively the "Parties").

WHEREAS, KU is the assignee and owner of U.S. Patent No. [***] and foreign counterparts all of which claim [***] ("KUCD"); and

WHEREAS, Pfizer desires to obtain a nonexclusive license under such U.S. Patent so that Pfizer can manufacture, use or sell certain [***] Products (as hereinafter defined); and

WHEREAS, KU is willing to grant such license;

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth in this Agreement, the Parties agree as follows:

1. Definitions

The following terms used in this Agreement shall have the following meanings:

1.1 "Affiliate" means (a) in the case of Pfizer, any corporation or other legal entity owning, directly or indirectly, fifty percent (50%) or more of the voting capital shares or similar voting securities of Pfizer; any corporation or other legal entity fifty percent (50%) or more of the voting capital shares or similar voting rights of which is owned, directly or indirectly, by Pfizer, or any corporation or other legal entity fifty percent (50%) or more of the voting capital shares or similar voting rights of which is owned, directly or indirectly, by a corporation or other legal entity which owns, directly or indirectly, fifty percent (50%) or more of the voting capital shares or similar voting securities of Pfizer; and (b) in the case of KU, any corporation or other legal entity which is formed by KU or enters into a joint venture with KU to perform any activities related to KUCD.

1.2 "Licensed [***] Products" means any [***] Product, the manufacture, use or sale of which would infringe a Valid Claim within the Patent Rights in the absence of a license.

1.3 "Major Market" means [***], [***], [***].

1.4 "Net Sales" means the gross amount invoiced by Pfizer or any sublicensee of Pfizer for sales to a third party or parties of [***], less normal and customary trade discounts

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actually allowed, rebates, returns, credits, taxes the legal incidence of which is on the purchaser and separately shown on Pfizer's or any sublicensee of Pfizer's invoices and transportation, insurance and postage charges, if prepaid by Pfizer or any sublicensee of Pfizer and billed on Pfizer's or any sublicensee of Pfizer's invoices as a separate item.

1.5 [***] means any pharmaceutical preparation incorporating (a) KUCD and (b) one or more compounds owned or licensed by Pfizer as of the Effective Date of the Option Agreement dated December 3, 1993 between the Parties or any new chemical entity discovered or obtained by Pfizer during the term of this Agreement, providing such preparation is intended for [***] use and is not an [***] Product (as defined in the Option Agreement) or a product indicated for [***] use.

1.6 "Patent Rights" means:

(a) U.S. Patent No. [***], any division, continuation, continuation-in-part, renewal, patent of addition, extension, reissue, and any foreign counterpart thereof, and

(b) rights under all other composition-of-matter, method of use and process patents and applications therefor, whether U.S. or foreign, claiming in each case KUCD only, for use as an excipient only, including all continuations, continuations-in-part, divisions, renewals and patents of addition, and extensions, and reissues thereof. This definition does not include rights under any patent claiming KUCD as an active ingredient, either alone or in combination with other active ingredients or excipients.

1.7 "Territory" means all countries of the world in which Patent Rights subsist.

1.8 "Valid Claim" means a claim to a composition of matter claim and in the United States only, a KUCD method of use claim within Patent Rights so long as such claim shall not have been disclaimed by both KU or Pfizer or shall not have been held invalid in a final decision rendered by a tribunal of competent jurisdiction from which no appeal has been or can be taken. By way of further explanation, a Valid Claim does not include KUCD process claims anywhere in the world and KUCD method of use claims outside the United States.

2. Grant of License, Term, Rights and Obligations

2.1 License Granted to Pfizer under the Patent Rights.

KU grants to Pfizer a nonexclusive license, including the right to grant sublicenses, to manufacture, use and sell [***] Products in the Territory under the Patent Rights (the "License").

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

2.2 Term of License Grant.

Unless terminated earlier as provided below, the License shall commence on the Effective Date and shall terminate in each country in the Territory on the date on which the last to expire of the Patent Rights expires.

2.3 Sublicensing Obligations.

If Pfizer grants a sublicense pursuant to Section 2, Pfizer shall guarantee that any sublicensee fulfills all of Pfizer's obligations under this Agreement. Pfizer further agrees to incorporate in all sublicenses granted hereunder provisions similar to those contained herein at Section 3.5 (Records); Section 5 (Termination); and Section 9 (Non-Use of Names), and a confidentiality provision no less stringent than that contained in Article 10 of the Option Agreement dated December 3, 1993 between the Parties (the "Option Agreement"). Pfizer further agrees to forward to KU a copy of each sublicense agreement entered into hereunder, and a copy of all reports received by Pfizer from its sublicensees during each [***] period.

2.4 Technical Assistance.

KU shall provide to Pfizer or any sublicensee of Pfizer, at Pfizer's request and expense, any technical assistance reasonably necessary to enable Pfizer or such sublicensee to manufacture, use or sell [***] Products and to enjoy fully all the rights granted to Pfizer pursuant to this Agreement; provided, however, that KU is reasonably capable of providing that assistance.

3. Royalties, Payments of Royalties, Accounting for Royalties, Records

3.1 Patent Rights.

Pfizer shall pay KU a royalty based on the Net Sales of Licensed [***] products. Such royalty shall be paid with respect to each country of the world from the date of [***] (the date of the invoice of Pfizer or any sublicensee of Pfizer with respect to such sale) of such Licensed [***] Product in each such country until the expiration of the last Patent Right to expire with respect to each such country and each such Licensed [***] Product. By way of explanation, Pfizer shall pay royalties pursuant to Section 3.2.2. with respect to the manufacture of Licensed [***] Products whose manufacture would infringe a Valid Claim if it were done by an unlicensed third party, such royalties to be paid on the Net Sales of such Licensed [***] Products even if the actual sale of such Licensed [***] Products would not alone infringe a Valid claim if such sales were made by an unlicensed third party.

3.2 Royalty Rates.

3.2.1 The Royalties payable under Section 3.1 above shall be at the rate set forth in Section 3.2.2; provided, however, that the Royalty rate otherwise applicable to Net Sales of

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[***] Products in the United States shall be reduced by [***] percent ([***]%) until such time that KU obtains a license from the National Institutes of Health to NIH's U.S. Patent No. [***] ("[***] Patent") and any foreign counterparts to make, use and sell [***] with the right to sublicense to Pfizer.

3.2.2 Pfizer shall pay a Royalty of [***] percent ([***]%) of Net Sales made in each calendar year throughout the world; provided, however, that Pfizer shall receive a credit against such Royalties of up to [***]% of Royalties due each quarter, beginning in the first quarter in which Royalties are due hereunder, until a total credit of U.S. $[***] is achieved.

3.3 Payment Dates.

Royalties shall be paid by Pfizer on Net Sales within [***] days after the end of each calendar quarter in which such Net Sales are made. Such payments shall be accompanied by a statement showing the Net Sales of each [***] Product upon which Royalties are payable by Pfizer or any sublicensee of Pfizer in each country, the applicable Royalty rate for such [***] Product, and a calculation of the amount of Royalty due.

3.4 Accounting.

The Net Sales used for computing the Royalties payable to KU by Pfizer shall be computed in U.S. dollars, and such Royalties shall be paid in U.S. dollars by check or other mutually acceptable means. For purposes of determining the amount of Royalties due, the amount of Net Sales in any foreign currency shall be computed by (a) converting such amount into dollars at the prevailing commercial rate of exchange for purchasing dollars with such foreign currency as quoted by Citibank in New York on the last business day of the calendar quarter for which the relevant Royalty payment is to be made by Pfizer and (b) deducting the amount of any governmental tax, duty, charge, or other fee actually paid in respect of such conversion into, and remittance of dollars.

3.5 Records.

Pfizer shall keep for [***] years from the date of each payment of Royalties complete and accurate records of sales by Pfizer of each [***] Product for which Royalties are payable in sufficient detail to allow the accruing Royalties to be determined accurately. KU shall have the right for a period of [***] years after receiving any report or statement with respect to Royalties due and payable to appoint at its expense an independent certified public accountant reasonably acceptable to Pfizer to inspect the relevant records of Pfizer to verify such report or statement. Pfizer shall make its records available for inspection by such independent certified public accountant during regular business hours at such place or places where such records are customarily kept, upon reasonable notice from KU, to verify the accuracy of the reports and payments. Such inspection right shall not be exercised more than [***] in any calendar year nor more than [***] with respect to sales in any given period. KU agrees to hold in strict confidence all information concerning royalty payments and reports, and all information learned in the

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course of any audit or inspection, except to the extent necessary for KU to reveal such information in order to enforce its rights under this Agreement or if disclosure is required by law. The failure of KU to request verification of any report or statement during said three-year period shall be considered acceptance of the accuracy of such report, and Pfizer shall have no obligation to maintain records pertaining to such report or statement beyond said three-year period. The results of each inspection, if any, shall be binding on both Parties.

4. Entire Agreement

The Option Agreement, the Exhibits thereto, the Confidentiality Agreements dated March 24, 1992, May 7, 1992, and July 14, 1992 and this Agreement are the sole agreements with respect to the subject matter and supersede all other agreements and understandings between the Parties with respect to same. Section 2.5 and Articles 7, 8, 9, 10, 11, 12, 13, 14 and 18 of the Option Agreement are hereby incorporated as if fully set forth herein.

5. Termination of this Agreement

5.1 Pfizer may terminate this Agreement, with or without cause, upon [***] days notice to KU.

5.2 Either Party may terminate this Agreement upon material breach by the other if such material breach remains unremedied [***] days after written notice of same.

5.3 Termination of this Agreement pursuant to this Section shall not affect the status of the Option Agreement (except that the Nonexclusive Option thereunder shall no longer be exercisable) or the Exclusive License Agreement (if it is in effect at the time of termination of this Agreement), and such Agreements shall remain in full force and effect in accordance with their respective terms.

5.4 All rights set forth in this Section shall be in addition to, and not in limitation of, any right either Party may have with respect to the other at law or in equity by virtue of any breach or default in the performance of the terms and conditions of this Agreement.

6. Indemnification; Insurance

6.1 Pfizer shall at all times during the term of this License and thereafter indemnify, defend and hold KU and its trustees, officers, employees and Affiliates harmless from and against any and all claims, proceedings, demands, losses, damages, liabilities, costs and expenses of any nature whatsoever (including without limitation reasonable attorneys fees) arising out of or connected with the manufacture, marketing, promotion, distribution, use or sale of the [***] Products or arising our of Pfizer's failure to perform or negligence in the performance of any obligation hereunder.

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6.2 Pfizer agrees to insure all Products and Pfizer activities associated therewith in the same manner in which it insures any other similar Pfizer [***] products and such activities.

7. Governing Law

This License shall be governed by and construed in accordance with the laws of the State of Kansas.

8. Notices

All notices shall be in writing mailed via certified mail, return receipt requested, courier or facsimile transmission addressed as follows, or to such other address as may be designated from time to time:

If to Pfizer: To Pfizer at its address as set forth at the beginning of this License.
Attention: President, Central Research,with copy to: Office of General Counsel

If to KU: To KU at its address as set forth at the beginning of this License.
Attention: Director

Notice shall be deemed given as of the date sent.

9. Non-Use of Names

Pfizer shall not use the name of KU or of any K& employee in any advertising, promotional or sales literature without KU's prior written consent, except that Pfizer may state that it is licensed by KU under the Patent Rights.

10. Miscellaneous

10.1 Binding Effect. This License shall be binding upon and inure to the benefit of the Parties and their respective legal representatives, successors and permitted assigns.

10.2 Headings. Paragraph headings are inserted for convenience of reference only and do not form a part of this Agreement.

10.3 Counterparts. This License may be executed simultaneously in two or more counterparts, each of which shall be deemed an original.

10.4 Amendment; Waiver. This License may be amended, modified, superseded or canceled, and any of the terms may be waived, only by a written instrument executed by each Party or, in the case of waiver, by the Party or Parties waiving compliance. The delay or failure of either Party at any time or times to require performance of any provisions shall in no manner affect the rights at a later time to enforce the same. No waiver by either Party of any condition

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or of the breach of any term contained in this License, whether by conduct or otherwise in any one or more instances shall be deemed to be or considered as a further or continuing waiver of any such condition or of the breach of such term or any other term of this License.

10.5 No Third Party Beneficiaries. No third party including any employee of either Party shall have or acquire any rights by reason of this License. Nothing contained in this License shall be deemed to constitute the Parties partners with each other or any third party.

10.6 Assignment and Successors. This License may not be assigned by either Party, except that each Party may assign this License and the rights and interests of such Party, in whole or in part, to any of its Affiliates. Notwithstanding the foregoing, Pfizer may assign this License to any purchaser of all or substantially all of its assets or to any successor corporation resulting from any merger or consolidation of Pfizer with or into such corporation. and KU may similarly assign this License to any successor entity.

10.7 Force Majeure. Neither Pfizer nor KU shall be liable for failure of or delay in performing obligations set forth in this License if such failure or delay is due to natural disasters or any causes reasonably beyond the control of the Party failing to perform (each a "Force Majeure Event"). Upon the occurrence of any Force Majeure Event, the Party whose performance is affected thereby shall promptly give written notice of such Force Majeure Event to the other Party, and both parties shall use all reasonable efforts to overcome such Force Majeure Event.

10.8 Severability. If any provision of this License is or becomes invalid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, it is the intention of the Parties that the remainder of the License shall not be affected.

10.9 Kansas Open Records Act. This License is subject to the provisions of the Kansas Open Records Act, K.S.A. 45-215 et seq.

IN WITNESS WHEREOF, the Parties have caused this License to be executed by their duly authorized representatives.

PFIZER INC	CY DEX, L.C.
By: /s/ [Illegible]	By: /s/ [Illegible]
Title: Vice President	Title: President
Date: 22 May 1991	Date: June 4, 1996

Exhibit 10.110

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

Pfizer Inc.
50 Pequot Avenue
New London, CT 06320
Tel. 860 732 4844 Fax 860 732 7029

[Pfizer Logo]

Global Research & Development

George M. Milne, Jr., Ph.D.
Senior Vice President, Pfizer Inc.
Executive Vice President, PGRD
President, Worldwide Strategic & Operations Management

December 11, 2001

Mr. Karl Strohmeier
Vice President, Corporate Development
CyDex, Inc.
12980 Metcalf Avenue
Suite 470
Overland Park, KS 66213

Re: **Addendum to June 4, 1996 Nonexclusive License Agreement**

Dear Mr. Strohmeier:

Further to our recent discussions regarding the Nonexclusive License Agreement dated June 4, 1996 ("Agreement") between Pfizer Inc. ("Pfizer") and the University of Kansas ("KU"), assigned to CyDex, Inc. ("CyDex"), we agree to amend the Agreement to include animal health products as subject matter as follows:

1. Section 1.2 of the Agreement is hereby deleted and replaced by the following:

"Section 1.2 "Licensed [***] Products" means any [***] Product, the manufacture, use, or sale of which would infringe a Valid Claim within the Patent Rights in the absence of a license."

2. Section 1.5 of the Agreement is hereby deleted and replaced by the following:

"Section 1.5 "[***] Product" means any pharmaceutical preparation incorporating (a) KUCD and (b) one or more compounds owned or licensed by Pfizer as of the Effective Date of the Option Agreement dated December 3, 1993 between the

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parties or any new chemical entity discovered or obtained by Pfizer during the term of this Agreement, providing such preparation is intended for [***] use and is not an [***] Product (as defined in the Option Agreement) or a product indicated for [***] use.

3. Section 3.2 of the Agreement is hereby amended to add the following subsections:

"Section 3.2.1 The royalties paid under section 3.2.2 shall be paid on Net Sales of [***] Products intended for [***]."

"Section 32.3 in addition to royalties paid to CyDex pursuant to Section 3.2.2. on Net Sales of [***] Products [***], Pfizer shall pay a royalty of [***] percent ([***]%) of Net Sales of Licensed Non-Antifungal Products approved for [***], made in each calendar year throughout the Territory."

"Section 3.2.4 One-Time Fee

Pfizer shall pay to Cydex a non-refundable one time fee of [***] dollars ($[***]), which amount shall be due and payable within [***] days of the execution of this Agreement by CyDex."

"Section 3.2.5 Milestone Payments

Within [***][***] days following the occurrence of each of the milestone events as listed below with respect to each Licensed [***] Product approved for [***], Pfizer shall provide written notice to CyDex of the achievement of such event, and within [***] days of the occurrence of each of the milestone events, pay to CyDex the applicable non-refundable milestone fee listed next to each such event. The milestone payments are as follows:

Milestone	Payment
[***]	[***]
[***]	[***]

4. Section 8 will be deleted and replaced by the following:

"Section 8. Notices

All notices shall be in writing mailed via certified mail, return receipt requested, courier or facsimile transmission addressed as follows, or to such other address as may be designated from time to time:

If to Pfizer:

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

Senior Vice President
Pfizer Global Research and Development 50 Pequot Avenue
New London, CT 06320
With copy to: Assistant General Counsel

If to CyDex: To CyDex at its address as set forth at the beginning of this Agreement.
Attention: General Counsel

Notice shall be deemed given as of the date sent."

All other terms and conditions of the Agreement shall remain the same and in full force and effect.

By signing and returning this Amendment to Dr. Laura Winka at Pfizer Global Research and Development, you agree to its terms and conditions.

Sincerely,

/s/ George M. Milne
George M. Milne Jr., Ph.D.
Executive Vice President, PGRD
President
WW Strategic & Operations Management

Agreed:

CyDex, Inc.

By: /s/ Karl Strohmeier
Name: Karl Strohmeier
Date: December 18, 2001

cc: Assistant General Counsel , PGRD

Exhibit 10.111

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

February 22, 2008

Steve Warren
Vice Provost for Research and Graduate Studies
and President of the KU Center for Research, Inc.
The University of Kansas
2385 Irving Hill Road
Lawrence, Kansas 66045

Re: Acknowledgement

Dear Steve:

In the course of reviewing our files, it has come to our attention that certain aspects of the agreements and assignments between CyDex Pharmaceuticals, Inc., formerly CyDex, Inc. ("***CyDex***") and CyDex L.C., and The University of Kansas ("***KU***") (collectively, the "***Agreements***") may be unclear or ambiguous. By signing below, each of KU and CyDex confirm the following:

1. The Option Agreement between KU and Pfizer Inc. ("***Pfizer***"), effective December 3, 1993, was assigned under the Option Agreement Assignment, made November 5, 1993 and executed November 8, 1993 by KU, despite the incorrect reference to the date of the Option Agreement in the Option Agreement Assignment.

2. The License Agreement between KU and CyDex L.C., effective September 3, 1993 (as amended in the Letter Amendment to License Agreement, effective February 25, 1998, and the Second Amendment to License Agreement, effective August 4, 2004), granted to CyDex L.C. all of the rights necessary for CyDex L.C. to (i) enter into the Exclusive and 'Nonexclusive License Agreements with Pfizer, both effective June 4, 1996 (collectively the "***Pfizer Licenses***") and (ii) assume all of the rights and obligations of KU under such Pfizer Licenses.

3. The Agreements and all rights thereunder that may have been previously held by CyDex L.C. have been properly transferred and/or assigned by CyDex L.C. to CyDex, Inc.

4. The [***] shares of Series A-1 Preferred Stock of CyDex (the "***Shares***") issued to the University of Kansas Center for Research, Inc. (the "***Center for Research***") under that Stock Purchase Agreement dated as of August 4, 2004 and currently having a liquidation preference of [***] per share under CyDex's Amended and Restated Certificate of Incorporation, constitute all shares of Series A-1 Preferred Stock required to be issued by CyDex under Section 1 of that Second Amendment to License Agreement

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CyDex Logo

between CyDex and KU (the "***Second Amendment***") and that the issuance of such Shares to the Center for Research fulfills in all respects CyDex's obligation to issue shares under the Second Amendment and that CyDex has fully paid for the rights granted to CyDex thereunder.

Please sign the enclosed copy of this letter and return it to my attention by fax to (913) 685-8856, with the original to follow by mail at your earliest convenience.

We are grateful for your kind assistance and appreciate your prompt attention to this matter. If you have any questions, please do not hesitate to call me at (913) 402-3550.

Sincerely,

/s/ John M. Siebert

John M. Siebert, Chief Executive Officer
CyDex Pharmaceuticals, Inc.

Acknowledged and Agreed:

The University of Kansas

By: /s/ Steve Warren

Name: Steve Warren

Title: Vice Provost for Research and Graduate Studies and President of the KU Center for Research, Inc.

Date: 3-3-08

Exhibit 10.112

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

Execution Copy

LICENSE AGREEMENT

This LICENSE AGREEMENT ("Agreement") is made and entered into as of January 4, 2006, ("Effective Date") by and between CyDex, Inc. ("CyDex" or "Licensor"), a corporation with its principal place of business located at 10513 W. 84th Terrace, Lenexa, Kansas 66214, and PRISM PHARMACEUTICALS, INC. ("Prism" or "Licensee"), a Delaware corporation, with its principal place of business located at 1150 First Ave, Suite 1050, King of Prussia, Pennsylvania, 19406, each a "Party" and together the "Parties."

WHEREAS, CyDex is the owner of certain patents and rights relating to Captisol-enabled® Amiodarone and certain related compounds, as are further defined below, and;

WHEREAS, Prism desires to obtain an exclusive worldwide license to develop, market, make, have made, use, distribute, offer for sale, sell, import and export products by practicing said patents, and;

WHEREAS, Prism desires to develop said products, without limitation, including but not limited to process development, non-clinical development, clinical development, and manufacture, and;

WHEREAS, CyDex is willing to grant to Prism said license under said patents, subject to the terms and limitations set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which each Party acknowledges, the Parties hereto agree as follows:

1. DEFINITIONS.

1.1 "**Approval**" shall mean the first effective date on which sales of a new drug may begin, in accordance with a new drug approval received from FDA.

1.2 "**Captisol**"® means the [***] -based solubility technology.

1.3 "**Captisol"® Supply Agreement**" shall have the meaning set forth in Section 10.3.

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1.4 "**CyDex**" means CyDex, Inc. and any subsidiary or any other entity in which CyDex, Inc., directly or indirectly, owns more than 50% of the voting securities, partnership, or other ownership interest.

1.5 "**Confidential Information**" shall mean any proprietary, confidential information (whether or not patentable or copyrightable), whether or not so marked, that is not generally known to third parties and that has actual or potential economic value by reason of not being generally known. Confidential Information includes, without limitation, trade secrets, and nonpublic know-how, data, processes, formulas, methods, technology, manufacturing techniques, cost and pricing information, sales and marketing information, and information of third parties held by a Party in confidence. Documents and things containing or embodying Confidential Information are Confidential Information. Confidential Information does not include information that:

(a) was known to the receiving party, as evidenced by the receiving party's written records, before receipt from the disclosing party;

(b) is disclosed to the receiving party by a third person who is under no obligation of confidentiality to the disclosing party hereunder with respect to such information and who otherwise has a right to make such disclosure;

(c) is or becomes generally known to the public through no fault of the receiving party;

(d) is independently developed by the receiving party, as established by the receiving party's contemporaneous written records, without access to or reliance on the other Party's Confidential Information; or

(e) is required to be disclosed by law, rule or regulation of any court or regulatory authority of competent jurisdiction; provided, that a Party required to disclose the other Party's Confidential Information shall notify the other Party as soon as possible and, if requested by the other Party, use reasonable good faith efforts, at its own expense, to assist in seeking a protective order (or equivalent protection) with respect to such disclosure or otherwise take reasonable steps to avoid making such disclosure.

1.6 "**Default**" shall have the meaning set forth in Section 17.1.3(b).

1.7 "**Effective Date**" means the date first set forth above.

1.8 "**Encumbrance**" means any mortgage, charge, lien, security interest, easement, right of way, pledge or encumbrance of any nature whatsoever.

1.9 "**FDA**" means the U.S. Food and Drug Administration.

1.10 "**FDA Communication**" shall mean any communication or inquiry to or from the FDA related to the Product Intellectual Property or Licensed Products, including but not limited to communications which are verbal, electronic, written, formal submissions, chronological files and any other record of any communication.

1.11 "**Fees**" shall have the meaning set forth in Section 9.1.

1.12 "**Field of Use**" or "**Field**" means all uses in humans and animals.

1.13 "**Force Majeure Event**" shall have the meaning set forth in Section 18.13.

1.14 "**GAAP**" means U.S. generally accepted accounting principles.

1.15 "**Governmental Entity**" or "**Governmental Entities**" means any (i) federal, state, local, foreign or international government; (ii) court, arbitral or other tribunal or governmental or quasi-governmental authority of any nature (including any governmental agency, political subdivision, instrumentality, branch, department, official or entity); or (iii) body exercising, or entitled to exercise, any administrative, executive, judicial or legislative, police, regulatory, or taxing authority or power of any nature pertaining to government.

1.16 "**IND**" means an investigational new drug application, as defined in the United States Federal Food, Drug and Cosmetics Act and the regulations promulgated thereunder, where such application is for a Licensed Product.

1.17 "**Indemnified Party**" shall have the meaning set forth in Section 15.2.1.

1.18 "**Indemnifying Party**" shall have the meaning set forth in Section 15.2.1.

1.19 "**Knowledge**" means actual knowledge.

1.20 "**License**" shall have the meaning set forth in Section 2.1.

1.21 "**Licensed Products**" means Captisol-enabled® Amiodarone [***]and all formulations for all uses [***]. A product that is a Licensed Product in any jurisdiction is a Licensed Product in all jurisdictions.

1.22 "**Losses**" shall have the meaning set forth in Section 15.1.

1.23 "**Management Committee**" shall have the meaning set forth in Section 3.1.

1.24 "**NDA**" means a new drug application, as defined in the United States Federal Food, Drug and Cosmetics Act and the regulations promulgated thereunder, where such application is for a Licensed Product.

1.25 "**Net Sales**" means, for any Royalty Payment Period, the sum of:

1.25.1 gross revenues invoiced by Prism or its authorized sublicensee during the Royalty Payment Period on the first arm's length sale for commercial use of Licensed Products, whether by Prism or its authorized sublicensee, to an unaffiliated third party ("Product Sales"), less only: (1) normal and customary quantity, trade or cash allowances/discounts, credits or volume discounts given in connection with the sale of Licensed Products; (2) credits actually

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allowed for returns of Licensed Products sold; (3) normal and customary chargebacks, rebates and refunds actually granted and taken; (4) freight and insurance to the extent separately identified on the invoice, (5) sales and other excise taxes and duties related to or in connection with the sale, transportation or delivery of the Licensed Products (taxes assessed against Licensee's income are not deductible in calculating Net Sales), and (6) uncollectible accounts receivable not to exceed [***]% of gross revenues invoiced during the prior [***] month period, provided that if there is less than [***]month history of invoiced sales, then the multiplier shall be the actual gross revenues invoiced commencing with the first commercial sale. The deductions set forth in the previous subsections 1-6 shall be determined in accordance with GAAP and itemized on the Quarterly Royalty Reports; and

1.25.2 milestones, fees and other consideration paid to Prism by any sublicensee of Prism's rights under the License during the Royalty Payment Period; provided, however, that this Section 1.26.2 shall not include any amount that is calculated based on Product Sales. By way of example and not limitation, Net Sales shall not include any royalty paid to Prism based on a sublicensee's Product Sales if Prism also pays a Royalty on the same Product Sales made by such sublicensee.

1.26 "**Party**" means individually CyDex or Prism, as the context dictates, and "Parties" means collectively, CyDex and Prism.

1.27 "**Patent(s)**" means any and all patents and patent applications filed in the Territory as of the Effective Date which are owned by or licensed to CyDex with the right to sublicense, and which claim the product known as Captisol-enabled® Amiodarone (and all polymorphs and active metabolites of amiodarone known by CyDex (or its agents) as of the Effective Date) for claimed uses in [***] and the developing, marketing, commercializing, manufacturing, making, having made, using, distributing, selling, offering for sale, importing or exporting thereof; together with all patents that in the future issue therefrom in any country of the Territory, including utility, model and design patents and certificates of invention and all continuations, continuations-in-part, reissues, re-examinations, renewals, extensions, substitutions, confirmations or additions to any such patents and patent applications, extensions, divisionals, improvements as of the Effective Date, ancestors, descendents and foreign counterparts of any of the foregoing, whether or not pending on the Effective Date, and including, without limitation, any other application (U.S. or foreign) claiming priority from or through any of the foregoing. For the avoidance of doubt, the Patents include, as of the Effective Date, but are not limited to, the patents and patent applications set forth on Exhibit A.

1.28 "**Person**" means any individual, corporation, partnership, limited liability company, joint venture, trust, business association, organization, governmental entity, or other entity, including any successor or assigns (by merger or otherwise) of any such entity.

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1.29 "**Prism**" means Prism, and any, subsidiary or any other entity in which Prism owns, directly or indirectly, more than 50% of the voting securities, partnership, or other ownership interest.

1.30 "**Product Copyrights**" means all registered and unregistered copyrights which are owned by, controlled by or licensed to CyDex with the right to sublicense as of the Effective Date or acquired by CyDex during the Term related to the Licensed Products in the Field in the Territory, including both published works and unpublished works.

1.31 "**Product Intellectual Property**" means the Product Technology, Patents, the Product Trademarks, and the Product Copyrights.

1.32 "**Product Medical Materials**" means any of the following: (i) all adverse event reports related to the Licensed Products, including any correspondence with the FDA, reports or other documents relating thereto, (ii) all data, information and files relating to the adverse· experiences relating to the Licensed Products and (iii) all medical responses relating to the Licensed Products, and written, telephone and personal contact inquiries relating to the Licensed Products.

1.33 "**Product Sales**" shall have the meaning set forth in Section 1.26.

1.34 "**Product Technology**" means, in all cases which are owned by, controlled by or licensed to CyDex with the right to sublicense as of the Effective Date or acquired by CyDex during the Term, all inventions (patentable or unpatentable) regardless of whether patent rights have yet been obtained or applied for, Specifications, technical data, clinical data, know-how, research and development information, knowledge and other information, whether in existence on the Effective Date or in the future related to, or are desirable for, or are necessary or useful for the development, manufacture, formulation, reformulation, packaging, testing, marketing, use, distribution, commercialization, offer for sale, sale, import and export of the Licensed Products in the Field in the Territory, but excluding any common industry practice, process or procedure.

1.35 "**Product Trademarks**" means all of CyDex's trademarks (whether registered or unregistered) in the Territory related to any Licensed Product that are owned by, controlled by or licensed to CyDex with the right to sublicense as of the Effective Date or acquired by CyDex during the Term, including but not limited to those trademarks set forth on Exhibit B.

1.36 "**Quarterly Royalty Reports**" shall have the meaning set forth in Section 9.4.2.

1.37 "**Registrations**" shall mean all the pending, withdrawn and/or approved applications, including but not limited to INDs, NDAs and orphan drug applications and designations, registrations and approvals for each of the Licensed Products currently in the name of CyDex and filed with the FDA or any other Regulatory Authority, including all information therein, each as more particularly described in Exhibit C.

1.38 "**Regulatory Authority**" shall mean any Governmental Entity in any country of the Territory competent to approve pharmaceutical products for manufacturing, marketing, distribution and sale in any country of the Territory and/or to approve the price for pharmaceutical products to be sold in any country of the Territory.

1.39 "**Royalties**" or "**Royalty**" shall have the meaning set forth in Section 9.2.

1.40 "**Royalty Payment Period**" shall have the meaning set forth in Section 9.4.1.

1.41 "**Specifications**" shall mean the specifications, formulations, recipes and manufacturing instructions for Licensed Products as known at the Effective Date and from time to time during the Term changed, altered, amended or repealed.

1.42 "**Term**" shall have the meaning set forth in Section 2.3 below.

1.43 "**Termination Date**" shall have the meaning set forth in Section 17.1.2.

1.44 "**Territory**" is worldwide.

1.45 "**U.S.**" means the United States of America.

2. LICENSE.

2.1 **License Grant**. Subject to the terms and limitations of this Agreement, CyDex grants to Prism a sole and exclusive license, with the right to grant sublicenses, under the Product Intellectual Property, to develop, market, manufacture, make, have made, use, distribute, commercialize, sell, offer to sell, import and export the Licensed Products (the "License") in the Field of Use and throughout the Territory.

2.2 **Nature of Exclusivity**. This license grant is exclusive even against CyDex, except that CyDex remains free to practice the Patents in the course of rendering goods or services to Prism or any of Prism's successors, assigns, licensees or customers in accordance with Prism exercising its rights under this License.

2.3 **Term**. Unless terminated in accordance with this Agreement, this License shall commence as of the Effective Date and shall remain in force and effect in perpetuity ("Term").

2.4 **Right to Sublicense**. Prism has the right to sublicense, in whole or in part, its rights under the License; provided that each sublicense shall include terms and provisions which protect CyDex's rights and interests substantially to the extent provided in Section 6.1, Article 8, Article 14, and Section 17.2.2(b) of this Agreement.

3. MANAGEMENT COMMITTEE.

3.1 The Parties shall establish a committee of up to six (6) of members which shall be designated and agreed upon in writing by each of Prism and CyDex and each of whom shall be senior executives of or experienced professional counsel to the appointing Party, provided that such professional counsel is (a) bound to protect the confidentiality of the Confidential Information of the other Party at least to the extent provided in Article 14 and (b) obligated to assign to the appointing Party any intellectual property developed in the course of its relationship with the appointing Party which shall be further assigned, if necessary, and owned in accordance with Article 6 (the "Management Committee"). The Parties shall work through the Management Committee to address issues related to obtaining legal and regulatory approvals for the Licensed

Products. The initial Management Committee is set forth on Schedule 3.1. At any time, a Party may replace one or more of its designees to the Management Committee by written notice to the other Party. The Management Committee shall meet quarterly (or more frequently as deemed necessary by the Management Committee), in a location or by telephone as mutually agreed by the Parties, to share information on the status of the development and commercialization of the Products in the Field in the Territory. The location of the meetings shall take place at Prism's principal office location. The Management Committee shall also discuss any requests by Prism for assistance from CyDex pursuant to this Agreement.

4. DATA DELIVERY AND TRANSFER OF SPONSORSHIP.

4.1 **Data Delivery**. CyDex shall deliver to Prism no later than [***] days after the Effective Date a copy of all books and records, then in CyDex's possession, control or use, related to the Product Medical Materials, the Product Intellectual Property and FDA Communication, including but not limited to, back up files and materials, relating to regulatory filing and compliance, and the research, development, pre-clinical and clinical studies (including pending, completed and discontinued studies), testing, analysis, marketing, use, off-label use, sale or distribution of the Licensed Products. Such books and records shall be catalogued and identified appropriately by CyDex and delivered to Prism in a complete and orderly fashion, accompanied by a master list identifying the name and contents of each individual file.

4.2 **Transfer of Sponsorship**. Cydex shall promptly after the Effective Date send written notice as reasonably requested by Prism to the FDA transferring the sponsorship of the Registrations to Prism and Prism shall promptly after the Effective Date send written notice, as reasonably requested by CyDex or at its own discretion, to the FDA assuming all obligations thereunder, and such notices shall have an effective date that is approximately [***] days after the Effective Date (or such other date as may be agreed to by the Parties). CyDex shall reasonably assist Prism with the preparation and filing of all amendments to INDs, NDAs and orphan drug designations related to the Licensed Products. The Parties shall coordinate with one another and shall send such notices simultaneously, and each Party shall deliver a copy of its FDA notice to the other Party. CyDex shall promptly furnish to Prism the Registrations, to the extent not previously transferred, and the books and records relating thereto.

5. PRISM'S RESPONSIBILITIES; CYDEX ASSISTANCE; MANUFACTURING AGREEMENT.

5.1 **Prism's Responsibilities**.

5.1.1 Prism shall be solely responsible for, exercising commercially reasonable discretion, the developing, marketing, offering for sale, sale, advertising, promotion, distribution, making, having made, manufacturing, exporting, importing, and all other exploitation of the Licensed Products in the Territory.

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

5.1.2 Prism shall have the sole and absolute discretion to develop the Licensed Products for purposes of obtaining regulatory approvals and commercializing and selling the Licensed Products in the Field in the Territory, subject to commercially reasonable efforts and compliance with the terms and conditions of this Agreement and applicable Laws, rules and regulations. Except as otherwise set forth in this Agreement, Prism shall bear all expenses it incurs with respect to its development of the Licensed Products after the Effective Date.

5.1.3 Prism shall be responsible for obtaining, at its own expense, all applicable legal and regulatory approvals for the Licensed Products, including but not limited to all FDA and other Regulatory Authority permits and approvals, in all jurisdictions in which Prism seeks to make, use or sell the Licensed Products.

5.1.4 During the Term, Prism will be responsible for ongoing safety monitoring of the Licensed Products and for regulatory compliance of the Licensed Products, the NDA and the IND.

5.2 **CyDex Assistance**. If Prism reasonably requests (through the Management Committee or otherwise) that CyDex provide assistance to Prism's preparation and filing of any document or other information with the FDA or any other Regulatory Authority of filings required to be filed by Prism for the development, commercialization, manufacture, marketing, distribution, offer for sale, sale, import or export of the Licensed Products, then CyDex shall provide such assistance to Prism. CyDex will assist Prism throughout the Term with FDA submissions and information regarding the Licensed Products to the medical community, customers, manufacturers and as otherwise necessary for Prism to develop, commercialize, manufacture, market, distribute, offer for sale, sell, import, export and/or sublicense the Licensed Products. Such assistance shall include CyDex's providing Prism with CyDex's expertise and reasonable access to CyDex's employees, consultants and agents, subject to their availability which shall be reasonably provided.

5.3 **Manufacturing Agreement**. Prism will be responsible for the identification and selection of one or more manufacturers for the Licensed Products. CyDex will use its commercially reasonable efforts to assist Prism in the transfer to the selected manufacturer(s) of the process and other Product Intellectual Property necessary to manufacture the Licensed Products. The ultimate selection of any manufacturer and the negotiation of any manufacturing supply agreement with such manufacturer shall be in the sole right and discretion of Prism.

6. PATENT MANAGEMENT.

6.1 **Marking**. Prism shall ensure that the Licensed Products, and all packaging and labeling therefor, as well as all promotional, marketing, and advertising material associated with the Licensed Products, as applicable, bear forms of patent notice and marking meeting the requirements of the applicable jurisdiction(s) and reasonably acceptable to CyDex. Prism shall provide samples of the foregoing to CyDex upon request

6.2 **Prosecution and Maintenance of Patents as of the Effective Date**. CyDex shall retain ownership of all Patents, subject to this License, that CyDex owns on the Effective Date and CyDex shall continue prosecution of all patent applications related to the Licensed

Products that are pending as of the Effective Date and shall pay all costs associated therewith. CyDex shall promptly inform Prism of any actions regarding the prosecution of all such patent applications. [***] and [***] by [***] the [***] of [***], [***] have [***] with respect to [***].

6.3 **Maintenance of Patents after the Effective Date**.

6.3.1 [***] be [***] for and [***] and [***] with the [***] of the [***] the [***]. During the Term, CyDex shall not abandon any of the Patents without first providing prior written notice to Prism of such intention to abandon (which notice shall, in any event, be given no later than [***] days prior to the next deadline for any action that may be taken with respect to the Patent in the relevant patent office) and such Patent shall be assigned by CyDex to Prism, at Prism's option.

6.3.2 During the Term, Prism shall have the right, in its sole and absolute discretion with respect to any determination, to secure patent protection for any intellectual property, arising out of the License, invented or created by Prism or on its behalf (and assigned or assignable to it).

6.3.3 With respect to any patent application filed after the Effective Date, Prism shall be responsible for and pay the costs of prosecution and maintenance of all such Patents. Prism may elect, in its sole and absolute discretion, to discontinue or forgo the prosecution or maintenance of any Patent. Should Prism so elect, Prism shall give written notice in advance of Prism taking any such action (which notice shall, in any event, be given no later than [***] days prior to the next deadline for any action that may be taken with respect to the Patent in the relevant patent office) to CyDex. CyDex shall then have the right, in its sole and absolute discretion, to maintain or prosecute such Patent.

6.4 **Intellectual Property Ownership**. Any inventions relating to the Licensed Products made during the Term shall be owned by the inventor and joint inventions shall be owned equally by all inventors, in each case determined by rules of inventorship under United States patent law, or as is otherwise determined by the Parties' written agreement. All such inventions arising from any activity conducted by the Parties under this Agreement and associated intellectual property shall be assigned to Prism, at its option, by CyDex (or its agents). The parties agree to obtain such assignments of these inventions from the inventors as are necessary to satisfy their respective obligations under this Section 6.4.

7. ENFORCEMENT AND DEFENSE OF PATENTS.

7.1 **Notification**. Each Party agrees to promptly notify the other Party of their knowledge of any actual or suspected third-party infringement or violation of any of the Patents

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or other Product Intellectual Property, as well as of any claim, demand, invitation to license or other third-party challenge to the Patents or other Product Intellectual Property.

7.2 **Enforcement**.

7.2.1 Prism is solely responsible, in its sole and absolute discretion, and at its sole expense, for the enforcement and defense of any patent or intellectual property rights that it owns, including but not limited to patent and other intellectual property interests created by it or on its behalf (and assigned or assignable to it) pursuant to this Agreement.

7.2.2 With respect to the Product Intellectual Property licensed to Prism hereunder, except as is provided herein to the contrary, Prism shall be solely responsible for the enforcement and defense of such Product Intellectual Property, at its sole expense, during the Term. Notwithstanding the foregoing: (a) CyDex agrees to be joined as a party plaintiff, at Prism's request and as is reasonably required to pursue an enforcement action; (b) counsel selected by Prism shall be reasonably acceptable to CyDex; (c) Prism shall give CyDex prompt notice that an infringement or other action has been commenced concerning any of the Product Intellectual Property, an opportunity to review and approve in advance any demand, cease and desist letter or invitation to license, and if commercially practical, at least [***] days prior written notice of its intent to commence an enforcement action; (d) Prism shall give CyOcx prompt written notice of its decision not to enforce or defend any of the Product Intellectual Property; and (e) Prism shall not enter into any settlement agreement or consent judgment, nor shall it make any material admission relating to validity or enforceability of any of the Product Intellectual Property or with respect to CyDex which would materially adversely effect CyDex without the prior written consent and approval of CyDex, which shall not be unreasonably withheld. In the event CyDex joins or is named as a party in any enforcement or defense action, CyDex shall have the right but not the obligation to retain separate counsel at its own expense. Any recovery of damages in any enforcement action by Prism involving the Product Intellectual Property shall be allocated as follows: (i) first, to the payment of attorney's fees and other costs and expenses of the litigation; (ii) second, the amount that Prism is responsible for making any required payments to its sublicensees; (iii) third, the remainder to be divided between Prism and CyDex, with CyDex receiving an amount equal to the remainder multiplied by the Royalty rate applicable to Prism's Net Sales in the most recent Royalty Payment Period. In the event [***] to [***] or [***] of the [***] or the [***], [***] the [***] the [***] to [***] or [***] at [***] , as the [***] be, and in the [***] to [***] or [***] and [***] to [***].

7.3 **Procedure**. Each Party, regardless of whether it joins in a legal action, agrees to reasonably cooperate with the other to assist in the prosecution or defense of any actions described in this Article 7. In addition to any other obligation set forth in this Agreement, each Party shall keep the other regularly informed on developments in any such action in which it

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participates or obtains information, if the other Party is not involved. With respect to the foregoing actions, each Party shall cooperate with each other in such a manner as to preserve in full (to the extent possible) the confidentiality of any of the other Party's Confidential Information and the attorney-client and work-product privileges. In connection therewith, each Party agrees that: (i) the provisions of Article 14 shall apply to the production of Confidential Information, and (ii) all communications between any Party hereto and counsel responsible for participating in the defense of any third-party claim or with respect to any action regarding the Product Intellectual Property to the extent such action involves or impacts Prism's right to develop, commercialize, market, manufacture, distribute, sell, offer for sale, import and/or export the Products in the Field in the Territory, shall, to the extent possible, be made so as to preserve any applicable attorney-client or work-product privilege.

8. TRADEMARKS.

8.1 Licensee agrees to comply with any requirements established by Licensor concerning the style, design, display and use of the Licensed Trademarks; to use the registered trademark symbol ® with every use of the mark; and to submit in advance of its use advertising copy, labels, stickers or packaging to Licensor for approval, which shall not be unreasonably withheld.

8.2 When requested, Licensee agrees to send samples of advertising and promotional materials, as well as promotional and advertising materials bearing or sold under the Product Trademarks and any other documents which may permit Licensor to determine whether the services and trademark uses meet the standards, specifications and directions approved by Licensor.

8.3 Licensee agrees that ownership of the Product Trademarks and the goodwill relating thereto shall remain vested in Licensor both during the period of this Agreement and thereafter, and Licensee further agrees never to challenge, contest or question the validity of Licensor's ownership of the Product Trademarks or any registrations thereof by Licensor.

8.4 Licensee agrees to inform Licensor of the use of any marks similar to the Product Trademarks and any potential infringements of Licensor's mark which come to its attention.

8.5 Prism may use its own trademark(s), service marks, logos and trade dress for the marketing and sale of the Licensed Products, and it shall be solely responsible for the registration, maintenance, enforcement and defense of any such marks.

9. FEES AND ROYALTIES.

9.1 In consideration of the rights and license granted pursuant to this Agreement, Prism shall pay to CyDex the following fees ("Fees") upon the attainment of the milestones set forth in the table below:

a. A one-time Fee upon the [***]	[***]
b. A one-time Fee upon the [***]	[***]
c. A one-time Fee upon the [***]	[***]
d. A one-time Fee upon the [***]	[***]
e. A one-time Fee upon [***]	[***]

9.2 In addition to its payments of Fees pursuant to Section 9.1, Prism shall pay to CyDex royalties on Net Sales ("Royalty" or "Royalties") commencing with the first commercial sale of a Licensed Product as follows:

a. Subject to the reduction set forth in (c) below, Royalty on annual Net Sales of the Licensed Products on the first [***], in total, paid to Prism during any calendar year:	[***]%
b. Subject to the reduction set forth in (c) below, Royalty on annual Net Sales of the Licensed Products totaling more than [***]paid to Prism during any calendar year:	[***]%
c. Notwithstanding anything to the contrary herein, at the time that there is no longer regulatory exclusivity in the United States, the Royalty on Net sales of the License Products shall be reduced [***].	

9.3 **Calculation of Royalties**. All Royalties payable shall be calculated first in the currency of the jurisdiction in which payment was made, and then converted into U.S. dollars. The exchange rate for such conversion shall be the rate quoted in The Wall Street Journal on the last business day of the applicable Royalty Payment Period.

9.4 **Royalty Payment Periods and Reports**.

9.4.1 Prism shall pay Royalties to CyDex on a quarterly basis, measured by each calendar quarter, beginning with the [***] in [***] of [***] ("Royalty Payment Period(s)"). Prism shall pay Royalties in full within [***]days after the end each Royalty Payment Period. All Royalties and Fees shall be paid in U.S. dollars and directed to such addresses and payees as CyDex may designate in writing from time to time.

9.4.2 Whether or not Royalties are payable at the end of a Royalty Payment Period, Prism shall provide to CyDex within [***]days after the end of such Royalty Payment Period a written report ("Quarterly Royalty Report(s)") summarizing the volume of sales of the Licensed Products in each jurisdiction, gross revenue paid to Prism on sale of the Licensed Products or other sublicense fees as set forth in Section 1.26.2, deductions to determine Net Sales thereof, Net Sales, and Royalties payable.

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9.5 **Late Payments**. Unpaid balances shall accrue interest, from the due date until paid, at a rate equal to the lesser of (i) the prime rate, as reported in *The Wall Street Journal*, on the date such payment is due, plus an additional [***] percent ([***]%) or (ii) the maximum rate permitted under applicable law.

9.6 **Taxes**. All amounts due under this Agreement are exclusive of any applicable taxes, including without limitation, sales, use, value-added, and withholding taxes, and Prism shall pay or withhold all such taxes as required by law. Notwithstanding the foregoing, any and all withholding taxes or similar charges assessable to Prism on Royalties or other amounts payable hereunder for sales in the Territory outside of the United States will be deducted from such amount due, will be paid by the payer to the proper taxing authority, and Prism shall use commercially reasonable efforts to obtain proof of payment of said tax, as well as any other documents or confirmations reasonably required by CyDex to recover any such withholding taxes or parts thereof from the proper tax authorities, and sent to CyDex as evidence of such payment.

9.7 **Audit Rights**. Licensee shall make and maintain for a period of at least [***] years records of its sales of Licensed Products, gross revenues paid to Prism on the sale of Licensed Products and deductions in calculating Net Sales. Licensor, at its expense, shall have the right to inspect, copy and audit (itself or through its representative, subject to a confidentiality agreement reasonably acceptable to Licensee) such books and records at the premises of Licensee during normal business hours, within [***]business days of notice to Prism of its request to conduct such an inspection or audit. CyDex may not exercise this right more than [***] in any [***] month period during the Term, and only [***] [***] within the [***] month period after this Agreement expires or is terminated. Prism shall provide reasonable cooperation in the conduct of any inspection or audit. In the event the audit shows an underpayment of more than [***] percent ([***]%) for any applicable Royalty Payment Period, Licensee shall pay Licensor the amounts underpaid. In addition, in the event the audit shows an underpayment of more than [***] percent ([***]%) for any applicable Royalty Payment Period, Licensee shall pay Licensor, in addition to the amounts underpaid, the reasonable third party costs of such audit. In the event the audit shows an overpayment of more than [***] percent ([***]%) for any applicable Royalty Payment Period, Licensor shall pay Licensee the amount of such overpayment less the reasonable third party costs of such audit (not to exceed the amount of the overpayment). Any amount discovered to be due under an audit shall not give rise to a right to terminate this Agreement for failure to make Royalty Payments if such deficiency is paid within [***]days of the audit report; provided, however, that if Licensee is not in agreement with the audit report, then the Parties shall resolve such dispute in accordance with Section 18.8 and this Agreement may not be terminable by Licensor for reasons of underpayment until the resolution of such dispute in Licensor's favor.

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10. PURCHASE AND SUPPLY OF CAPTISOL®.

10.1 **Purchase of the Captisol®**. During the Term, CyDex shall sell to Prism and/or its designee the [***].

10.2 **Quality Control**. CyDex shall perform routine quality control tests with respect to all Captisol® as required by the FDA, as requested in writing by Prism, or otherwise as CyDex deems necessary in accordance with its applicable policies, and [***]. CyDex shall permit Prism reasonable access to the copies of the records of such quality control tests performed on each lot or batch of Captisol®.

10.3 **Captisol® Supply Agreement**. The parties agree to negotiate in good faith a Supply Agreement for Captisol® ("Captisol® Supply Agreement") which shall include terms addressing pricing, safety stock, supply failure procedures, rights and obligations and other normal and customary terms. The parties agree to enter into a definitive Captisol® Supply Agreement no later than [***].

11. NOTICE OF SAFETY OR EFFICACY CONDITIONS:

11.1 Each Party shall promptly notify the other Party of its Knowledge of any fact, circumstance, condition or knowledge that bears on (i) the safety or efficacy of Captisol® or the Licensed Products or (ii) the safety of any of the Licensed Products. Each Party may use and disclose such information to the extent necessary to comply with law.

12. WARRANTIES; DISCLAIMERS.

12.1 **Representation and Warranties of Both Parties**. Each Party represents, and warrants to the other Party that:

(a) it is a corporation duly organized and validly existing under the laws of the state or country of its incorporation;

(b) the execution and delivery of this Agreement and the performance of the transactions contemplated hereby have been duly authorized by all necessary corporate action of such Party;

(c) the execution and delivery of this Agreement and the performance by such Party of any of its obligations under this Agreement do not and will not:

(i) conflict with, or constitute a breach or violation of, any other contractual obligation to which it is a party, any judgment of any court or governmental body applicable to such Party or its properties, or, to such Party's Knowledge, any statute, decree,

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order, rule or regulation of any court or governmental agency or body applicable to such Party or its properties, and

(ii) require any consent or approval of any governmental authority or other person;

(d) it will, to the best of its knowledge without undertaking a special investigation, disclose to the other Party any material adverse proceedings, claims or actions that arise that would materially interfere with that Party's performance of its obligations under this Agreement.

12.1.1 **Representations and Warranties of CyDex**. CyDex, as an inducement to Prism to enter into this Agreement, represents, warrants or covenants to Prism, as applicable, as follows:

(a) **Right to License**. CyDex owns or controls the Product Intellectual property and has full right, power and authority, free of any Encumbrance, to grant the License. As of the Effective Date, CyDex is not aware of any fact or circumstances that the Licensed Products are, in or with respect to the Territory, subject to any restrictions, covenants, licenses other than this Agreement, or judicial and administrative orders of any kind, which detract in any material respect from the value of the Licensed Products or the Product Intellectual Property, or which could interfere with the use thereof by Prism in the Territory as contemplated by this Agreement.

(b) **No Inability to Receive Approval**. As of the Effective Date, CyDex is aware of no facts that would lead it to conclude that any of the Licensed Products will be unable to receive Approval or approval from any other Regulatory Authority; provided that clinical development and other regulatory requirements are completed in accordance with all applicable Laws, rules and regulations.

(c) **Clear Rights**. As of the Effective Date, CyDex has not received any notice and has no Knowledge that (i) the rights to the Product Intellectual Property or the Licensed Products have been challenged or that there exists any reasonable basis for such a challenge in any judicial or administrative proceeding, or (ii) any person, entity or product has infringed or that any person or entity intends to infringe any patent rights encompassed by the Licensed Products or the Product Intellectual Property and applicable to the Licensed Products, or (iii) any patent rights or other intellectual property rights, including but not limited to rights of trademark, trade dress and copyright, have been infringed by CyDex in connection with the Licensed Products or will be infringed by Prism by virtue of exercising the License granted by this Agreement.

(d) **Intellectual Property Rights**.

(i) As of the Effective Date, Exhibit A contains a true and correct list of the Patents. The omission of any Patent from this definition shall not prejudice Prism's right to such intellectual property pursuant to the License.

(ii) Exhibit B contains a true and correct list of the Product Trademarks. The omission of any trademark from Exhibit B shall not prejudice Prism's right to such trademark pursuant to the License. All of the Product Trademarks listed on Exhibit B as registered or filed have been duly registered in the Territory in the name of CyDex with the appropriate Governmental Entities and are in full force and effect.

(e) CyDex has taken commercially reasonable precautions to protect the secrecy and confidentiality of the Product Intellectual Property, other than the Patents, Product Copyrights and Product Trademarks to the extent publicly known.

12.1.2 **Litigation**. As of the Effective Date, there is no suit, claim, action, investigation or proceeding pending or, to the Knowledge of CyDex, threatened against CyDex that relates to the Licensed Products or Product Intellectual Property, or challenges or seeks to prevent or enjoin the License. CyDex has no Knowledge of any settlements, court decisions or agreements involving any third party and existing on the Effective Date that would have a material adverse effect on the Licensed Products.

12.2 **No Brokers**. CyDex has not entered into any agreement, arrangement or understanding with any Person or firm which will result in the obligation of Prism to pay any finder's fee, brokerage commission or similar payment in connection with the transactions contemplated hereby.

12.3 **Disclaimer**. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH IN THIS ARTICLE 12, NEITHER PARTY MAKES ANY REPRESENTATIONS OR GRANT ANY WARRANTIES, EXPRESS OR IMPLIED, AND EACH PARTY SPECIFICALLY DISCLAIMS ANY OTHER WARRANTIES, WHETHER WRITTEN OR ORAL, OR EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

13. LIMITATION OF LIABILITY.

NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT OR OTHERWISE, AND EXCEPT FOR THE PARTIES' OBLIGATIONS TO INDEMNIFY AS SET OUT HEREIN AND EXCEPT FOR INFRINGEMENT OR VIOLATION OF THE OTHER PARTY'S PATENT OR OTHER INTELLECTUAL PROPERTY RIGHTS OR A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS HEREUNDER, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT, UNDER ANY EQUITY, COMMON LAW, TORT, CONTRACT, ESTOPPEL, NEGLIGENCE, STRICT LIABILITY OR OTHER

THEORY, FOR ANY INCIDENTAL, SPECIAL, PUNITIVE, EXEMPLARY, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO DAMAGES RESULTING FROM LOSS OF SALE, BUSINESS, PROFITS, OPPORTUNITY OR GOODWILL), EVEN IF A PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF ANY OF THE FOREGOING DAMAGES.

14. CONFIDENTIALITY.

14.1 The Parties anticipate that, in the course of their relationship in connection with this Agreement, they are likely to exchange Confidential Information. Each Party agrees to use the other's Confidential Information only to exercise its rights and perform its duties pursuant to this Agreement.

14.2 Each Party agrees not to disclose the other's Confidential Information to third parties without the other's express prior, written consent, except that each may disclose the other's Confidential Information:

14.2.1 to those of its employees, representatives and agents that it reasonably requires to have access to same in order to perform its obligations and/or exercise its rights under this Agreement, provided such employees, representatives or agents are bound by obligations of confidentiality comparable to those set forth in this Section 14; and

14.2.2 to the extent such disclosure is reasonably necessary in filing or prosecuting patent applications or complying with orders of any court, other Governmental Entity or arbitral body or with applicable laws or governmental regulations, provided that if a Party intends to make any such disclosure, it shall use reasonable efforts to give reasonable advance written notice to the other Party of such intended disclosure to permit such other Party to seek such protective orders or other similar relief as may be available in the circumstances.

14.3 Each Party agrees to safeguard the other's Confidential Information against unauthorized use and disclosure with means at least as stringent as it employs to safeguard its own Confidential Information, and in no event with less than reasonable means.

14.4 The obligations of confidentiality in this Section 14 are in addition to and not in lieu of any confidentiality obligations the Parties may owe each other as a matter of underlying law, and the obligations herein shall survive the termination or expiration of this Agreement for so long as the information at issue continues to meet the definition of Confidential Information set forth in Section 1.6.

15. INDEMNIFICATION AND INSURANCE.

15.1 **Indemnification**.

(a) **Indemnification by Licensor**. Licensor shall indemnify and hold Licensee and its affiliates, officers, directors, employees, and agents harmless from and against any and all liability, damage, loss, cost (including reasonable attorneys' fees) and expenses related to any third-party claims ("Losses") to the extent arising from or in connection with:

(i) Licensor's breach of any representation, warranty, covenant or agreement contained in this Agreement; or (ii) any infringement or alleged infringement of intellectual property rights resulting from Licensee's authorized use of the Product Intellectual Property; provided, however, that excluded from this Section 15.1(a) is any claim that is a result of willful misconduct or grossly negligent act of Licensee or breach by Licensee of this Agreement to the extent covered in Section 15.l(b)(i) below.

(b) **Indemnification by Licensee**. Licensee, to the extent not caused by, related to or in any way connected with the acts of Licensor, shall indemnify and hold Licensor and its affiliates, officers, directors, employees, and agents harmless from and against any and all liability, damage, loss, cost (including reasonable attorneys' fees) and expenses to the extent arising from or in connection with any third-party claims: (i) Licensee's breach of any representation, warranty, covenant or agreement contained in this Agreement, or (ii) the development, manufacturing, use, handling advertising, promotion, marketing or sale of Licensed Products by Licensee or any sublicensee of its rights under this Agreement; provided, however, that excluded from this Section 15.1(b) is any claim that is a result of willful misconduct or grossly negligent act of Licensor or breach by Licensor of this Agreement to the extent covered in Section 15.l(a)(i) above and excluded from Licensee's indemnification obligations under Section 15.l(b)(ii) are all matters to the extent covered by Licensor's indemnities under Section 15.1(a).

15.2 **Procedure**.

15.2.1 In order for an indemnified party under this Article 15 (an "Indemnified Party") to be entitled to any indemnification provided for under this Agreement, such Indemnified Party will, promptly following the discovery of the matters giving rise to any Loss, notify the indemnifying party under this Article 15 (the "Indemnifying Party") in writing of its claim for indemnification of such Loss, specifying in reasonable detail the nature of such Loss and the amount of the liability estimated to accrue therefrom; provided, however, that failure to give such prompt notification will not affect the indemnification provided hereunder except to the extent the Indemnifying Party will have been actually prejudiced as a result of such failure. Thereafter, the Indemnified Party shall promptly deliver to the Indemnifying Party, at the Indemnifying Party's expense, all information and documentation reasonably requested by the Indemnifying Party with respect to such Loss and the Indemnified Party shall cooperate fully with the Indemnifying Party, at the Indemnifying Party's expense, in the defense of such claim.

15.2.2 If an Indemnified Party gives notice to the Indemnifying Party pursuant to Section 15.2.1, the Indemnifying Party shall control the defense and settlement of such third-party claim (unless the Indemnifying Party is also a person against whom the third-party claim is made and the Indemnified Party determines in good faith that joint representation would be inappropriate, in which case the Indemnified Party shall have the right to select separate counsel to participate in the defense of such action on its behalf, and the Indemnified Party shall bear the

cost and expense of such separate defense, unless and to the extent the Parties otherwise agree or it is determined through arbitration hereunder that such costs and expense are or were required to be indemnified by the Indemnifying Party), with counsel selected by the Indemnifying Party that the Indemnified Party consents to as reasonably satisfactory, which consent shall not be unreasonably withheld. The Indemnifying Party shall not, so long as it diligently conducts the defense of such third party claim be liable to the Indemnified Party under this Article 15 for any fees of other counselor any other expenses with respect to the defense of such third party claim. No compromise or settlement of such third-party claim may be effected by either Party in a way that prejudices or adversely impacts the other Party without the other Party's prior written consent, which consent shall not be unreasonably withheld. Notwithstanding the assumption by the Indemnifying Party of the defense of any third-party claim as provided in this Article 15, the Indemnified Party will be permitted to join such defense and to employ counsel at its own expense. If notice is given to an Indemnifying Party of the assertion of any third-party claim and the Indemnifying Party does not, within [***] days after the Indemnified Party's notice is given, give notice to the Indemnified Party of its assumption of the defense of such third-party claim, the Indemnifying Party will be bound by any determination made in such third-party claim or any reasonable compromise or settlement effected in good faith by the Indemnified Party. Indemnified Party shall have the right to maintain the defense of such claim or action and the Indemnifying Party shall provide reasonable assistance to the Indemnified Party in the defense of such third party claim and to bear the reasonable cost and expense of such defense (including attorney's and experts' fees and expenses).

15.2.3 Notwithstanding the provisions of Section 18.8, the Parties each consent to the nonexclusive jurisdiction of any court in which a proceeding in respect of a third-party claim is brought by a third party either against Prism or CyDex for purposes of defense of such third party claim and each Party agrees that process may be served on it with respect to indemnification with respect to such third party claim in accordance with Section 18.12.

15.2.4 This Article 15 sets forth the Parties' complete and sole obligations to indemnify one another for Losses arising from or connected with third party claims.

15.3 **Insurance**. Licensee shall procure and maintain during the term of this Agreement, commercial general liability insurance, in commercially reasonable amounts, and with the insurance carriers licensed to do business in the jurisdiction where Licensee is located; provided, however, that Licensee shall not be required to maintain product liability coverage so long as Licensed Products are not being sold or used with humans.

16. PUBLICATION.

16.1 The Parties will consult with each other before issuing any press release or otherwise making any public statement or other disclosure with respect to this Agreement. Neither Party will issue any such press release or make any such public statement or other

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disclosure prior to receiving written approval from the other Party, unless compelled to do so under a regulatory or legal obligation.

16.2 From time to time, Prism may desire to publish or otherwise publicly announce the results of testing or from the research or development program involving any Licensed Products orally or in writing. CyDex shall not unreasonably withhold its consent to such publication or announcement.

17. TERMINATION.

17.1 **Termination**.

17.1.1 **Termination by Prism**. Prism may terminate this Agreement at any time, without cause, by giving [***]days prior written notice thereof to CyDex.

17.1.2 **Termination by CyDex**. CyDex may terminate this Agreement if an NDA for any of the Licensed Products has not been submitted to the FDA on or before the [***] year anniversary of the Effective Date (the "Termination Date"); provided, however, that CyDex must give Prism written notice of such termination within [***]days after the Termination Date.

17.1.3 **Termination by Either Party**.

(a) Either Party may terminate this Agreement upon a material or continuing breach of this Agreement by the other Party by giving [***]days prior written notice of termination, stating the claimed breach with specificity, and termination shall be effective as of the end of such [***]-day notice period unless the breach is then substantially cured or the breaching Party has commenced such actions necessary to cure the breach.

(b) Either Party may terminate this Agreement immediately by giving written notice of termination in the event of a Default. Events of Default shall occur if the other Party: (a) makes or attempts to make an assignment for the benefit of creditors; (b) becomes the subject of voluntary or involuntary bankruptcy proceedings, and such proceedings are not dismissed within [***]days, or if this License or the rights hereunder are conveyed out of bankruptcy; or (c) is convicted of any criminal offense in connection with the business associated with the Licensed Products.

17.2 **Effects of Termination or Expiration**.

17.2.1 Upon termination or expiration, each Party shall return to the other all of the other's Confidential Information that is capable of being returned, and destroy, in a manner that prevents undeletion, Confidential Information that is not capable of being transported.

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Except as otherwise provided herein, neither Party may use the other's Confidential Information after termination or expiration of this Agreement. Notwithstanding anything to the contrary, Prism may retain and use original Confidential Information to the extent that it relates to or is connected with any intellectual property owned by Prism.

17.2.2 If requested by CyDex within [***]days of the termination of this Agreement pursuant to Section 17.1.1, Section 17.l.2, or by CyDex pursuant to Section 17.1.3, Prism shall:

(a) [***] to the [***] or [***] the [***] of the [***], the [***] and the [***]) to [***] and [***], as reasonably requested [***] , to the FDA or any other applicable Regulatory Authority assuming all obligations thereunder and such notices shall have an effective date that is [***]days after the date of termination of this Agreement (or such other date as may be agreed to by the Parties). The Parties shall coordinate with one another and shall send such notices simultaneously, and each Party shall deliver a copy of its such notice of the FDA or any other applicable Regulatory Authority to the other Party.

(b) [***] to CyDex [***] and [***] including [***] and [***], relating to [***] and [***], and the [***] and [***] studies (including [***] and [***]), [***] or [***] of the [***].

(c) [***] to CyDex a [***] under [***] filed by Prism pursuant to Section [***] above, to make, have made, use, sell, offer to sell or import the Licensed Products.

(d) at the option of CyDex, [***] to CyDex [***] as of the date of termination to any or all of the patents abandoned by CyDex and [***] to [***] pursuant to Section [***] above.

17.2.3 Upon termination of this Agreement, Prism shall have no further payment, management, development obligations with respect to the Licensed Products.

18. MISCELLANEOUS.

18.1 **Entire Agreement**. This Agreement sets forth the entire agreement and understanding of the Parties on the subject matter herein, and it supersedes all prior agreements

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and understandings between the Parties with respect to its subject matter. No amendment or modification to this Agreement shall be effective unless in writing signed by an authorized representative of each Party.

18.2 **Assignment**. Neither Party may assign its rights or delegate its obligations under this Agreement without the express prior written consent of the other Party, except that either Party's rights and obligations may succeed by operation of law to the surviving entity in a merger or consolidation in which it participates or to a successor of all or substantially all of either Party's assets or stock. Any unauthorized assignment or transfer of this Agreement shall be void. Subject to the foregoing, the rights and liabilities of the Parties will bind and inure to the benefit of their respective successors, permitted assigns, insurers and reinsurers.

18.3 **Relationship**. The Parties are independent entities. Nothing contained in this Agreement or the Parties' conduct hereunder shall be construed to create a relationship of partners, joint venturers, principal and agent or employer/employee. Neither Party shall have any right, power or authority, express or implied, to bind the other Party.

18.4 **Survival**.

18.4.1 The representations and warranties contained in Article 12 shall survive the execution and delivery of this Agreement and remain true during the Term, except with respect to those representations and warranties which are limited to the Effective Date or which otherwise are limited to a particular time or which refer to past actions, which shall be true as of the Effective Date.

18.4.2 Each Party's covenants and agreements under this Agreement shall remain in effect only during the Term until performed by such Party, subject to any conditions to performance, discharge of the duty to perform and similar traditional contract interpretation principles.

18.4.3 Provisions of this Agreement that, by their nature, survive its termination or expiration shall so survive, including without limitation Sections 1 (Definitions), 17.2 (Effects of Termination or Expiration), 13 (Limitations), 14 (Confidentiality), 15.1-15.2 (Indemnity), and 18 (Miscellaneous Terms).

18.5 **Severability**. If any provision of this Agreement or portion thereof is finally held by a court of competent jurisdiction to be unenforceable, void, invalid, or otherwise contrary to law or equity, the Parties agree that such provision or portion thereof shall be reformed automatically as necessary to cure such defect, or if necessary to delete such provision or portion thereof, and that the remainder of this Agreement shall continue in full force and effect

18.6 **Waiver**. The observance of any provision of this Agreement may be waived (either generally or any particular instance and either retroactively or prospectively) only in a writing signed by both Parties. The failure of either Party to enforce its rights under this Agreement at any time for any period shall not be construed as a waiver of such rights.

18.7 **Fees and Expenses**. Each Party will bear all fees, costs and expenses incurred by it in respect of the negotiation, drafting and execution of this Agreement and the consummation

of the transactions contemplated thereby, including without limitation the fees and disbursements of its legal, financial and other advisors and any and all filing fees incurred by each of them in connection with obtaining all required approvals from and submitting all required filing to, all governmental and other regulatory agencies.

18.8 **Arbitration**. Any controversy, dispute or claim arising out of, in connection with, or in relation to the interpretation, performance or breach of this Agreement, or any amount due hereunder, including, without limitation, any claim based on contract, tort or statute shall be settled as follows: The Management Committee shall initially meet to attempt to resolve disputes. If the Management Committee cannot resolve such disputes within [***]days after either Party requests such a meeting, then either Party may request that the chief executive officer of each Party meet to attempt to resolve such dispute. If the chief executive officers cannot resolve such disputes within [***]days after either Party requests such a meeting, then such controversy, dispute or claim shall be settled, solely and exclusively, by arbitration. Any arbitration pursuant to this Agreement shall be conducted in [***] before and in accordance with the then existing Commercial Dispute Resolution Procedures through the American Arbitration Association, using an arbitrator mutually selected by CyDex and Prism from a list of those designated by the American Arbitration Association or, if the Parties disagree, otherwise appointed by the American Arbitration Association. At any time, a Party may seek or obtain preliminary, interim or conservatory measures from the arbitrators or from a court. Any arbitration shall be final and binding. The findings shall be delivered in a written opinion with findings of facts based on the record. Any judgment upon any interim or final award or order rendered by the arbitrator may be entered by any State or Federal court having jurisdiction thereof. The Parties intend that any agreement pursuant hereto to arbitrate be valid, enforceable and irrevocable. Each Party in any arbitration proceeding commenced hereunder shall bear such Party's own costs and expenses (including expert witness and attorneys' fees) of investigating, preparing and pursuing such arbitration claim. Notwithstanding the foregoing, neither Party shall be bound to follow the dispute resolution process described in this Section 18.8 with respect to any dispute for which interim equitable relief from a court is necessary to prevent serious and irreparable injury to a Party.

18.9 **Governing Law**. This Agreement shall be governed and construed in accordance with the laws of the state of Delaware, and without regard to its choice of law rules.

18.10 **Headings**. The headings used in this Agreement are for convenience only and are not to be used in interpreting the rights and obligations of the Parties under this Agreement.

18.11 **Counterparts; Facsimile**. This Agreement shall be effective upon full execution by facsimile or original, and a facsimile signature shall be deemed to be and shall be as effective as an original signature. This Agreement may be executed in any number of counterparts, each of which will be deemed an original, but all of which taken together shall constitute one single agreement between the Parties.

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18.12 **Notices**. Any notice or other communication required or permitted to be given hereunder, shall be in writing and shall be deemed to be given when delivered by hand or commercial overnight courier service with tracking capabilities or sent by certified mail (return receipt requested), all of the foregoing costs and postage prepaid, to the Parties at the addresses set forth below, or such other address as a Party may specify for the other by written notice;

For CyDex:
Attention: John M. Siebert Ph.D.
President and CEO
CyDex, Inc.
10513 W. 84th Terr.
Lenexa, Kansas 66214

For Prism:
Attention: Warren D. Cooper
President and CEO
Prism Pharmaceuticals, Inc
1150 First Ave., Suite 1050,
King of Prussia, PA, 19406

copy to:
Dinsmore & Shohl LLP
Attn: Paul R. Mattingly, Esq.
1900 Chemed Center
225 East Fifth Street
Cincinnati, Ohio 45202

18.13 **Force Majeure**. Neither Party hereto shall be held liable or responsible to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, which may include but not be limited to fire, floods, embargos, war, acts of war (whether war be declared or not), insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, acts of God, omissions or delays in acting by any Governmental Entity (including the FDA and Regulatory Authorities) or the other Party hereto (collectively, "Force Majeure Event").

18.14 **Drafting**. Each Party and its counsel has reviewed and had the opportunity to contribute to the drafting of this Agreement, and the rule of construction providing that any ambiguities are to be resolved against the drafting Party shall not be employed in the interpretation of this Agreement. This Agreement shall be construed as drafted by both Parties.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be signed by their duly authorized representatives.

CYDEX, INC.

By: /s/ John M. Siebert
John M. Siebert, Ph.D., President and CEO

Dated: 4 January, 2006

PRISM PHARMACEUTICALS, INC.

By: /s/ Warren D. Cooper
Warren D. Cooper, President and CEO

Dated: 1/4/2006

SCHEDULE 3.1

Initial Management Committee

Prism's designees to the Management Committee:

Kathleen DeLawrence
Dan Cushing
Robert Falconer

CyDex's designees to the Management Committee:

Jose Rodriguez
Jerry Mosher

EXHIBIT A

LICENSED PATENTS

EXHIBIT A

LICENSED PATENTS

Country	Patent Number	Application Number
[***]		[***]
[***]		[***]
[***]		[***]
[***]		[***]
[***]		[***]
[***]		[***]
[***]		[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]		

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EXHIBIT B

TRADEMARKS

[***]

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EXHIBIT C

REGISTRATIONS

[***]

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Exhibit 10.113

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

Execution Copy

AMENDMENT TO LICENSE AGREEMENT

This AMENDMENT to the certain License Agreement dated January 4, 2006 between CYDEX, INC. ("CyDex" or "Licensor"), a corporation with its principal place of business located at 10513 W. 84th Terrace, Lenexa, Kansas 66214, and PRISM PHARMACEUTICALS, INC. ("Prism" or "Licensee"), a Delaware corporation, with its principal place of business located at 1150 First Ave., Suite 1050, King of Prussia, Pennsylvania, 19406, granting an exclusive license under the Product Intellectual Property for the development, use and sale of Licensed Products in the Field of Use and throughout the Territory (the "License Agreement"), is made and entered into as of May 12, 2006 (the "Effective Date") by and between CyDex and Prism.

WHEREAS, pursuant to the terms of the License Agreement., Prism has the exclusive right to develop, market, manufacture, make, have made, use, distribute, commercialize, sell, offer to sell, import and export the Licensed Products in the Field of Use throughout the Territory, and;

WHEREAS, the Parties now seek to amend certain terms of the License Agreement as set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained in this Amendment and other good and valuable consideration, the receipt and sufficiency of which each Party acknowledges, the Patties hereto agree as follows:

1. The terms utilized in this Amendment shall have the same meanings set forth in the License Agreement, unless otherwise indicated herein.

2. Section 5.2 of the License Agreement is hereby amended and restated in its entirety as follows:

"5.2 **CyDex Assistance**

5.2.1. General Know-How with Filings and Submissions. If Prism reasonably requests that CyDex provide general know-how to Prism's preparation and filing of any document or other information with the FDA or any other Regulatory Authority of filings required to be filed by Prism for the development, commercialization, manufacture, marketing, distribution, offer for sale, sale, import or export of the Licensed Products, then CyDex shall provide such general know-how to Prism. CyDex will provide general know-how to Prism throughout the Term regarding FDA submissions and information regarding the Licensed Products to the medical community, customers, manufacturers and as otherwise necessary for Prism to develop, commercialize, manufacture, market, distribute, offer for sale, sell, import, export and/or sublicense the Licensed Products. Such

general know-how shall include CyDex's providing Prism with CyDex's expertise and reasonable access to CyDex's employees, consultants and agents (subject to their availability which shall be reasonably provided), which access shall include but not be limited to, upon Prism's reasonable request, CyDex's correspondence via telephone, letters, and/or electronic mail.

5.2.2. Assistance with Filings and Submissions. From time to time Prism may reasonably request (through the Management Committee or otherwise), and CyDex may agree, that CyDex participate in meetings, presentations, teleconferences, and/or working sessions with Prism (and its contractors or agents) and/or FDA or any other Governmental Authority to, (i) provide assistance to Prism's preparation and filing of any document or other information with the FDA or any other Regulatory Authority of filings required to be filed by Prism for the development, commercialization, manufacture, marketing, distribution, offer for sale, sale, import or export, of the licensed Products and/or (ii) to support the transfer to, and registration of, the selected manufacturer(s) of the manufacturing process necessary to manufacture the Licensed Products.

5.2.3. Assistance with Development. From time to time, Prism may request, and CyDex may agree, that CyDex perform new development work and/or new method development work necessary to support the transfer to, and registration of, the selected manufacturer(s) of the manufacturing process for the Licensed Products. Such work may be related to the manufacture Licensed Products or their respective individual ingredients for the purpose of filler integrity testing, nephelometry, or any other uses arising from or relating to the License Agreement, and any tracking of data derived from such work.

The parties acknowledge and agree that CyDex shall perform all such work pursuant to Sections 5.2.2 and 5.2.3 only as requested by Prism in writing and Prism shall reimburse CyDex according to the following schedule:

Work conducted at CyDex, Inc.'s Principal Office:	
Senior Technical Staff	[***]
Technical Staff	[***]
Work Conducted by CyDex off-site	
Senior Technical Staff	[***]
Technical Staff	[***]

For off-site work conducted by CyDex, Prism shall reimburse CyDex for reasonable expenses, approved in advance by Prism, incurred in the performance of such off-site work.

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The Parties further hereby acknowledge and agree that CyDex shall be solely responsible for tracking the work performed by CyDex pursuant to this Section 5.2. and the time required to complete such work to be reimbursed by Prism.

CyDex shall invoice Prism for such work, such invoices shall summarize work performed, person performing the work, time spent on such work and all reimbursable expenses. CyDex shall invoice Prism upon completion of such approved work, unless the Parties agree otherwise. Payments for amounts invoiced by CyDex pursuant to this Section 5.2. shall be due and payable to CyDex on or before the [***] day after the date such invoice is issued by CyDex.

3. The last sentence of Section 10.3 of the License Agreement is amended as follows:

The parties agree to enter into a definitive Captisol® Supply Agreement no later than [***].

4. All terms and conditions of the License Agreement not expressly amended by this Amendment shall remain in full force and effect.

5. In the event of any dispute, conflict or ambiguity between the terms and conditions of this Amendment and the License Agreement, this Amendment shall control.

6. This Amendment (and any dispute, controversy, proceedings or claim of whatever nature arising out of or in any way relating to this Amendment or its formation) shall be governed and construed in accordance with the laws of the State of Delaware, and without regard to its choice of law rules.

7. This Amendment, and the License Agreement (where herein referenced), together constitute the Parties as to the subject matter of this Amendment, and supersede all prior negotiations, representations, agreements and understandings regarding the same.

8. This Amendment shall be effective upon full execution by facsimile or original, and a facsimile signature shall be deemed to be and shall be as effective as an original signature. This Amendment may be executed in any number of counterparts, each of which will be deemed an original, but all of which taken together shall constitute one and the same instrument.

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

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to be signed by their duly authorized representatives.

CYDEX, INC.

By: /s/ John M. Siebert
John M. Siebert, Ph.D., President and CEO

PRISM PHARMACEUTICALS, INC.

By: /s/ Warren D. Cooper
Warren D. Cooper, President and CEO

Exhibit 10.114

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

Executed Copy

SUPPLY AGREEMENT

THIS SUPPLY AGREEMENT (this **"Agreement"**) is made this 5th day of March, 2007 (the **"Effective Date"**), by and between **CyDex, Inc.**, a Delaware corporation with offices at 10513 W. 84th Terrace, Lenexa, Kansas 66214 ("**CyDex**"), and **Prism Pharmaceuticals, Inc.**, a Delaware corporation with offices at 1150 First Ave, Suite 1050, King of Prussia, Pennsylvania 19406 (**"Prism"**).

RECITALS

WHEREAS, CyDex is engaged in the business of developing and commercializing novel drug delivery technologies designed to enhance the solubility and effectiveness of existing and development-stage drugs;

WHEREAS, CyDex is the exclusive worldwide licensee of CAPTISOL®, a patented drug formulation system designed to enhance the solubility and stability of drugs;

WHEREAS, CyDex and Prism are also parties to a license agreement dated January 4, 2006 (as amended on December 22, 2006, the **"License Agreement"**), which sets forth the terms of a license from CyDex to Prism to use certain know-how and patents related to CAPTISOL-enabled® Amiodarone; and

WHEREAS, CyDex desires to sell CAPTISOL® to Prism, and Prism desires to purchase CAPTISOL® from CyDex, in accordance with the terms and conditions contained herein.

NOW, THEREFORE, in consideration of the following mutual promises and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties, intending to be legally bound, agree as follows:

1. DEFINITIONS.

For the purposes of this Agreement, the terms hereunder shall have the meanings as defined below:

1.1 "Affiliate" means, with respect to any party, any entity controlling, controlled by, or under common control with such party, during and for such time as such control exists. For these purposes, "control" shall refer to the ownership, directly or indirectly, of at least fifty percent (50%) of the voting securities or other ownership interest with the power to direct the management and policies of the relevant entity.

1.2 "Backup Manufacturing Facility" has the meaning specified in **Section 3.5(b).**

1.3 "CAPTISOL" means CAPTISOL®, also known scientifically as [***].

1.4 "Cause" has the meaning specified in **Section 3.5(d).**

1.5 "cGMPs" means all applicable standards relating to manufacturing practices for bulk excipients, including U.S. Pharmacopoeia <1078> and ICH Guidelines.

1.6 "Clinical Grade CAPTISOL" means CAPTISOL which (a) has been manufactured in accordance with the cGMPs and meets the Specifications for Clinical Grade CAPTISOL, (b) is intended for use in humans, and (c) is intended for manufacturing the Licensed Product for clinical trials.

1.7 "Commercial Grade CAPTISOL" means CAPTISOL which (a) has been manufactured in accordance with the cGMPs and meets the Specifications for Commercial Grade CAPTISOL, (b) is intended for use in humans, and (c) is intended for manufacturing the Licensed Product for commercial sale.

1.8 "Commercial Launch Date" means, in any particular country, the first sale by Prism, its Affiliates or sublicensees of the Licensed Product.

1.9 "Detailed Forecast" has the meaning specified in **Section 3.1(b).**

1.10 "DMF" means a Drug Master File for CAPTISOL, as currently filed, or as hereafter updated from time to time, by CyDex with the FDA.

1.11 "Failure to Supply" has the meaning specified in **Section 3.6(c).**

1.12 "FDA" means the United States Food and Drug Administration, or any successor thereto.

1.13 "File Retention Samples" has the meaning specified in **Section 3.4(c).**

1.14 ***"Force Majeure"*** means any event or circumstance beyond the reasonable control of the affected party, including but not limited to, fire, flood, typhoon, earthquake, natural disaster, explosion, war, strike, labor unrest, riot, embargo, act of terrorism, act or omission of carriers, act of God or enactment or revision of any law, rule, regulation or regulatory advisory opinion or order applicable to the manufacturing, marketing, sale, reimbursement and/or pricing of CAPTISOL or Licensed Product.

1.15 "ICH Guidelines" means all relevant guidelines promulgated from time to time by the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use.

1.16 "Indenmitee" has the meaning specified in **Section 8.4.**

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

1.17 "Indenmitor" has the meaning specified in **Section 8.4.**

1.18 "License Agreement" has the meaning specified in the Recitals above.

1.19 "Licensed Product" means CAPTISOL-enabled® Amiodarone (and all polymorphs and active metabolites of amiodarone known by CyDex (or its agents) as of the Effective Date of the License Agreement) and all formulations for all uses in humans and animals.

1.20 "Losses" has the meaning set forth in **Section 8.1.**

1.21 "Manufacturing Facilities" has the meaning specified in **Section 3.5(b).**

1.22 "Manufacturing License" has the meaning specified in **Section 3.6(d).**

1.23 "Marketing Approval" means final approval of an NDA by the FDA, or final approval of a comparable document filed with an equivalent health regulatory authority in any other country or in the European Union (using the centralized process or mutual recognition), including all required marketing, pricing or reimbursement approvals.

1.24 "NDA" means a New Drug Application, as defined in the United States Federal Food, Drug and Cosmetics Act and the regulations promulgated thereunder, or a similar application filed with an equivalent regulatory body in another country.

1.25 "Notice of Default" has the meaning specified in **Section 11.2.**

1.26 "Notice of Termination" has the meaning specified in **Section 11.2.**

1.27 "Primary Manufacturing Facility" has the meaning specified in **Section 3.5(b).**

1.28 "Purchase Volume Limitations" has the meaning specified in **Section 3.1(c).**

1.29 "Q1" "Q2," "Q3" or **"Q4"** has the meaning specified in **Section 3.1(b).**

1.30 "Quality" has the meaning specified in **Section 3.2.**

1.31 "Quality Agreement" has the meaning specified in **Section 3.4(a).**

1.32 "Research Grade CAPTISOL" means CAPTISOL which has not been manufactured under required conditions of current good manufacturing practices and is not suitable for use in humans, but which meets the Specifications for Research Grade CAPTISOL.

1.33 "Specifications" means the specifications for Research Grade, Clinical Grade and Commercial Grade CAPTISOL respectively, as set forth in ***Exhibit A*** hereto, as such may be amended from time to time pursuant to **Section 3.2.**

1.34 "Stability" has the meaning specified in **Section 3.2.**

1.35 "Term" has the meaning specified in **Section 11.1.**

1.36 "Territory" means the entire world.

1.37 "Testing Methods" has the meaning specified in **Section 3.4(b).**

1.38 "Third-Party Manufacturer" has the meaning specified in **Section 3.5(a).**

2. PURCHASE OF CAPTISOL. Subject to **Section 3.6(c),** Prism agrees that Prism and its Affiliates and sublicensees shall purchase CAPTISOL [***] from CyDex and that they shall [***]. CyDex agrees that CyDex shall produce (or have produced for it) and sell to Prism [***] of Prism's and its Affiliates' and sublicensees' requirements for CAPTISOL, during the Term and subject to the provisions of this Agreement. Purchases of CAPTISOL may include Research Grade CAPTISOL, Clinical Grade CAPTISOL and/or Commercial Grade CAPTISOL. Prism may place orders for CAPTISOL on behalf of its Affiliates and sublicensees; *provided, however,* that (a) Prism shall instruct CyDex as to the location for the shipment thereof; (b) [***] to [***] of [***] with [***] thereto; and (c) if Prism requests that CyDex deliver such orders to Prism for re-delivery thereof by Prism to its Affiliates or sublicensees, Prism shall comply with all applicable laws, rules and regulations applicable to the transportation of CAPTISOL from Prism to its Affiliates and sublicensees.

3. MANUFACTURE AND SUPPLY OF CAPTISOL.

3.1 Supply Terms.

(a) Long-term Forecast. No later than [***] months prior to the anticipated Commercial Launch Date by Prism or its Affiliates or sublicensees of the Licensed Product in any particular country, Prism shall provide CyDex with a forecast setting forth Prism's estimate of the required quantities of Commercial Grade CAPTISOL for each of the following [***] years. Such long-term forecast shall thereafter be updated by Prism at least [***] every [***] months.

(b) Binding Detailed Forecast. At least [***] days prior to the first order of Commercial Grade CAPTISOL, Prism shall deliver to CyDex a detailed rolling forecast setting forth Prism's requirements and anticipated delivery schedules for Commercial Grade CAPTISOL for each calendar quarter during the succeeding [***] month period (the **"Detailed Forecast"**). For purposes of this Agreement, a calendar quarter means the consecutive three (3) month period ending March 31, June 30, September 30, and December 31, respectively. The parties acknowledge and agree that the first [***] covered in the Detailed Forecast may be for a period less than the full three (3) month period but that each subsequent calendar quarter shall be for a full three (3) month period. The Detailed Forecast shall thereafter be updated by Prism quarterly on a rolling basis, no later than the first day of each calendar quarter, so that for each calendar quarter CyDex shall have been provided with a rolling Detailed Forecast for each calendar quarter during the [***] period commencing on the [***] day of the next calendar

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quarter following the date on which such Detailed Forecast is submitted. The Detailed Forecast shall be firm and binding on Prism, subject to the permissible variances set forth in **Section 3.1(c)** below, with respect to the first, second, and third calendar quarters covered by such updated Detailed Forecast (**"Q1"**, **"Q2"**, and **"Q3"**, respectively, and where the fourth calendar quarter shall be **"Q4"**). If Prism fails to provide an updated Detailed Forecast in accordance with this **Section 3.1(b)**, the Detailed Forecast last provided by Prism shall be deemed to be Prism's Detailed Forecast for the next succeeding [***] period.

(c) Detailed Forecast Variances. Each updated Detailed Forecast may modify the amount of Commercial Grade CAPTISOL estimated in the previous Detailed Forecast in accordance with the following limitations (the **"Purchase Volume Limitations"):**

(i) for the Q1 covered by such updated Detailed Forecast, [***] the forecast provided for the Q2 in the immediately preceding Detailed Forecast without the prior express written consent of CyDex;

(ii) for the Q2 covered by such updated Detailed Forecast, no change in excess of a [***]percent ([***]%) volume increase or decrease may be made to the forecast provided for the Q3 in the immediately preceding Detailed Forecast without the prior express written consent of CyDex; and

(iii) for the Q3 covered by such updated Detailed Forecast, no change in excess of a [***] percent ([***]%) volume increase or decrease may be made to the forecast provided for the Q4 in the immediately preceding Detailed Forecast without the prior express written consent of CyDex.

In each case CyDex's consent shall not be unreasonably conditioned, delayed or withheld.

(d) Purchase Orders. Prism shall place a firm purchase order with CyDex in a form mutually agreed upon by the parties, for Prism's order of Commercial Grade CAPTISOL for Q1 delivery consistent with the Detailed Forecast. Each purchase order, for all grades of CAPTISOL, shall specify (i) the grade of CAPTISOL ordered *(i.e.,* Commercial Grade CAPTISOL, Clinical Grade CAPTISOL or Research Grade CAPTISOL); (ii) quantities; (iii) delivery dates, and (iv) reasonable shipping instructions. CyDex shall use [***] to comply with Prism's requested delivery dates; *provided, however,* that any purchase order of Commercial Grade CAPTISOL is received by CyDex at least [***] days prior to the stipulated delivery date and that any purchase order of Clinical Grade CAPTISOL or Research Grade CAPTISOL is received by CyDex at least [***] days prior to the stipulated delivery date. No purchase order shall be binding upon CyDex until accepted by CyDex in writing; provided that CyDex (x) shall accept in writing within [***] days after CyDex's receipt of each purchase order for Clinical Grade CAPTISOL or Research Grade CAPTISOL, (y) shall accept in writing within [***] days after CyDex's receipt of each purchase order for Commercial

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Grade CAPTISOL from Prism with respect to the quantities of CAPTISOL ordered that do not exceed the Purchase Volume Limitations and (z) shall notify Prism of CyDex's ability to fill any quantities of such purchase order for Commercial Grade CAPTISOL that are in excess of the Purchase Volume Limitations within [***] days after CyDex's receipt of such purchase order. CyDex shall not be obligated to accept such orders to the extent that the quantities of Commercial Grade CAPTISOL ordered exceed the Purchase Volume Limitations, but CyDex shall use good faith efforts to fill such orders for such excess quantities from available supplies. If CyDex, despite the use of good faith efforts, is unable to supply such quantities that exceed the Purchase Volume Limitations to Prism, such inability to supply shall not be deemed to be a breach of this Agreement by CyDex or a failure (including a Failure to Supply) by CyDex to supply for any purpose. If any purchase order or other document submitted by Prism hereunder or any other document passing between the parties contains terms or conditions in addition to or inconsistent with the terms of this Agreement, the terms of this Agreement shall control and prevail and such additional or inconsistent terms are hereby expressly rejected.

3.2 Modified Specifications.

(a) General. Subject to the terms and conditions set forth in Section 3.2 hereof, CyDex shall have the right to change the Specifications from time to time during the Term. With respect to any change in the Specifications, CyDex shall give Prism at least [***] days notice of such change (the "**Change Notice**") to enable Prism to perform any tests to determine the impact of such change in the Specifications on the stability and quality specifications of the Licensed Product (the "**Stability**" and **"Quality",** respectively). CyDex shall not implement any changes specified in such Change Notice during the aforementioned [***] day period. In the event that Prism reasonably determines (and Prism shall have provided CyDex with written notice regarding its determination together with relevant data serving the basis thereof), that such change of Specifications may change the Stability and/or Quality or may have an adverse effect on any of Prism's regulatory approvals or regulatory applications/submissions concerning the Licensed Product and/or CAPTISOL (including without limitation, preventing receipt of such regulatory approval, or causing any delay or additional cost in obtaining such regulatory approval), then the following shall apply:

(i) CyDex shall be entitled to change the Specifications after the expiration of the Change Notice period; provided that upon CyDex's receipt of Prism's written request and a purchase order covering a period of [***] months, CyDex shall segregate in its inventories of CAPTISOL at the unchanged Specifications the amount of CAPTISOL ordered in such purchase order; provided that such amount shall not exceed [***] times the aggregate quantity of CAPTISOL specified in the last Detailed Forecast for the [***] months provided by Prism to CyDex prior to Prism's receipt of the Change Notice, which segregated amount shall be sold to Prism. The purchase order shall set forth scheduled delivery dates, which dates may be changed upon [***] days advance written notice to CyDex, *provided however,* that CyDex shall have no obligation to deliver the ordered CAPTISOL later than the [***] month period covered in the original purchase order given by Prism to CyDex pursuant to this **Section 3.2(a)(i)**.

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CyDex shall invoice Prism and Prism shall make payments to CyDex pursuant to **Section 4.2** hereof with respect to CAPTISOL purchased under this **Section 3.2(a)(i)**.

(ii) CyDex shall notify Prism pursuant to **Section 3.6(a)** in the event CyDex is unable to supply CAPTISOL at the unchanged Specifications. Following receipt of such notice, Prism may immediately exercise the Manufacturing License and the back-up manufacturing right for CAPTISOL at the unchanged Specifications and CyDex shall assist Prism in exercising the Manufacturing License and the back-up manufacturing right in accordance with **Sections 3.6(c)** and **3.6(d)** hereof for CAPTISOL at the unchanged Specifications.

(b) Changes Required by Regulatory Authorities. If any regulatory agency having jurisdiction requires any changes to the Specifications, CyDex shall use [***] to make such changes in accordance with the time frames and requirements of the applicable regulatory agency, without derogating from CyDex's right to contest any such requirement of any regulatory agency. CyDex shall promptly advise Prism as to any lead-time changes or other terms which may result from such a required change to the Specifications pursuant to this **Section 3.2(b)** and shall use all its commercially reasonable efforts to minimize the impact on Prism's purchase orders of such changes in lead-time or other terms.

(c) Reimbursement of Costs. CyDex shall be solely responsible for all costs incurred in implementing any changes to the Specifications except in the event that a change to the Specifications is (A) specific to the Licensed Product (and not generally with respect to CAPTISOL for all products using CAPTISOL as a component), and (B) required by any regulatory agency having jurisdiction or requested by Prism. In the event that the change is pursuant to the foregoing subclauses (A) and (B), then: (1) Prism shall [***] CyDex for [***] and [***] by CyDex or its Third-Party Manufacturer related to implementing such change, including without limitation for materials [***] by CyDex or its Third-Party Manufacturer expressly for Prism, its Affiliates or sublicensees and rendered unusable by Prism, its Affiliates or sublicensees due to such change in Specifications, and (2) CyDex shall have the right to [***] the for CAPTISOL by an [***] to the in manufacturing costs CyDex incurs due to such change.

3.3 Delivery. CyDex shall deliver to Prism or Prism's designee each order of CAPTISOL, packed for shipment in accordance with CyDex's customary practices and the Specifications and in a manner consistent with good commercial practices, [***] (Incoterms 2000) [***]. CyDex shall deliver such shipments to Prism or Prism's designee on or within [***] days prior to the delivery date that is set forth in the applicable purchase order for any grade of CAPTISOL (if the delivery date is not specified in the purchase order for Clinical Grade CAPTISOL or Research Grade CAPTISOL, within [***] days after CyDex's written acceptance to Prism of such purchase order in accordance with **Section 3.1(d)**. Title and risk of

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loss and/or damage to CAPTISOL shall pass to Prism upon delivery of CAPTISOL to Prism or Prism's designee at [***].

3.4 Quality Control; Acceptance and Rejection.

(a) Quality Agreement. Prior to Prism submitting its first purchase order for Commercial Grade CAPTISOL, the parties shall enter into a Quality Agreement (the **"Quality Agreement")** that shall be appended to this Agreement. The Quality Agreement shall govern the allocation of responsibilities and obligations of each party to ensure the quality of Commercial Grade CAPTISOL and the procedures for releasing Commercial Grade CAPTISOL. To the extent there are any inconsistencies or conflicts between this Agreement and the Quality Agreement, the terms and conditions of this Agreement shall control unless otherwise agreed to in writing by the parties.

(b) Quality Control. CyDex shall conduct or have conducted quality control testing of CAPTISOL prior to shipment in accordance with the Specifications and other quality control testing procedures approved by CyDex (the **"Testing Methods"**) and the Quality Agreement. CyDex shall retain or have retained accurate and complete records pertaining to such testing and release documents and similar documents in accordance with the Quality Agreement, industry standards and applicable laws. Each shipment of CAPTISOL hereunder ' shall be accompanied by a certificate of analysis for each lot of CAPTISOL therein. With each shipment of CAPTISOL, CyDex shall provide Prism with commercially appropriate shipping documentation, including bills of lading.

(c) Retention of Samples. CyDex shall, and shall cause the Third-Party Manufacturers to, properly store and retain for not less than [***] years after the date of last distribution of each batch by CyDex, samples (identified by batch number) of CAPTISOL and components thereof, in accordance with prudent industry standards and applicable laws (collectively, the "**File Retention Samples**"). CyDex shall provide Prism with reasonable access to and portions of the File Retention Samples for testing and other purposes upon Prism's request.

(d) Acceptance **Testing.** Prism shall have a period of [***] days from the date of receipt to test or cause to be tested CAPTISOL supplied under this Agreement. Prism or its designee shall have the right to reject any shipment of CAPTISOL that does not conform with the Specifications at the time of delivery pursuant to **Section 3.3** hereof when tested in accordance with the Testing Methods. In the case of CAPTISOL that fails to conform to the Specifications due to defects not readily discoverable prior to the shipment to Prism or within the [***] day period thereafter by inspection or analysis in accordance with the Testing Methods (such defects, "**Latent Defects**"), Prism shall have the right to reject any CAPTISOL with any Latent Defect discovered during the shelf life of the Licensed Product incorporating such CAPTISOL; provided that Prism shall notify CyDex in writing of any Latent Defect within [***] days from the date of discovery of such Latent Defect.

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(e) Confirmation. After its receipt of a notice of rejection from Prism pursuant to **Section 3.4(d)** above, CyDex shall notify Prism as soon as reasonably practical, in no event later than [***] days after its receipt of the notice of rejection whether it accepts Prism's basis for rejection and Prism shall cooperate with CyDex in determining whether such rejection was necessary or justified. If the parties are unable to agree as to whether a shipment of CAPTISOL supplied by CyDex or its Third-Party Manufacturer hereunder meets the Specifications, such question shall be submitted to an independent quality control laboratory mutually agreed upon by the parties. The findings of such independent laboratory shall be binding upon the parties. The cost of the independent quality control laboratory shall be borne by the party whose results are shown by such laboratory to have been incorrect.

(f) Return or Destruction of Rejected Shipments. Prism may not return or destroy any batch of CAPTISOL until the earlier of (i) its receipt of written notification from CyDex that CyDex does not dispute that the batch fails to meet the Specifications and (ii) determination of the independent quality control laboratory that the batch fails to meet the Specifications. CyDex shall promptly notify Prism in writing either that Prism is authorized to destroy the rejected batch of CAPTISOL or that CyDex requires return of the rejected CAPTISOL. Upon written authorization from CyDex to do so, Prism shall promptly destroy the rejected batch of CAPTISOL and provide CyDex with written certification of such destruction. Upon receipt of CyDex's request for return, Prism shall promptly return the rejected batch of CAPTISOL to CyDex. *i*n each case, CyDex will reimburse Prism for the documented, reasonable costs associated with the storage, destruction or return of the rejected CAPTISOL.

(g) Refund or Replacement. Prism shall not be required to pay any invoice with respect to any shipment of CAPTISOL properly rejected pursuant to this **Section 3.4**. Notwithstanding the foregoing, Prism shall be obligated to pay in full for any rejected shipment of CAPTISOL that is subsequently determined to meet the Specifications in all material respects, irrespective of whether Prism has already paid CyDex for a replacement shipment. If Prism pays in full for a shipment of CAPTISOL and subsequently properly rejects such shipment in accordance with this **Section 3.4**, Prism shall be entitled, upon confirmation that such shipment failed to meet the Specifications, either (i) to a refund or credit equal to the purchase price paid with respect to such rejected shipment; or (ii) to require CyDex to replace such rejected shipment at no additional cost to Prism. [***] and [***] that, [***] for the [***] set forth in [***] to a [***] or to [***] of [***] of [***] hereunder shall be [***], and [***], with respect to [***] hereunder.

(h) Exceptions. Prism's rights of rejection, return, refund and replacement set forth in this **Section 3.4** shall not apply to any CAPTISOL that is non-conforming due to damage (i) caused by Prism, its Affiliates or sublicensees or their respective employees or agents, including but not limited to, misuse, neglect, improper storage, transportation or use beyond any dating provided or (ii) that occurs subsequent to delivery of such CAPTISOL to the carrier at the

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point of origin, including but not limited to any damage caused thereafter by accident, fire or other hazard and CyDex shall have no liability or responsibility to Prism with respect thereto.

3.5 Facilities and Inspections.

(a) Third-Party Manufacturers. Without limiting CyDex's responsibility under this Agreement, CyDex shall have the right at any time to satisfy its supply obligations to Prism hereunder either in whole or in part through arrangements with third parties engaged to perform services or supply facilities or goods in connection with the manufacture or testing of CAPTISOL (each, a **"Third-Party Manufacturer")**. The parties hereby acknowledge and agree that, as of the Effective Date, [***] is a Third-Party Manufacturer. Notwithstanding anything to the contrary in this Agreement, CyDex shall remain fully responsible for the performance of such Third-Party Manufacturers and any breach or nonperformance of CyDex's obligations under this Agreement by a Third-Party Manufacturer shall constitute a breach or non-performance by CyDex.

(b) Location. CAPTISOL shall be manufactured in Loures, Portugal (the **"Primary Manufacturing Facility")** or Macau, People's Republic of China (the **"Backup Manufacturing Facility,** together with the Primary Manufacturing Facility, the **"Manufacturing Facilities"),** both of which have been, or will have been, approved by the applicable governmental or regulatory authorities prior to the commencement of manufacturing of CAPTISOL at such facilities. CyDex shall, and shall cause Third-Party Manufacturers to, maintain all regulatory permits and approvals with respect to both Primary and Backup Manufacturing Facilities (as applicable). With respect to CAPTISOL to be supplied to Prism, CyDex shall not use any facility other than the Manufacturing Facilities and shall not change from one Manufacturing Facility to the other Manufacturing Facility except in accordance with the authorization of the applicable governmental or regulatory authorities and the change control procedures and with prior written notice to Prism.

(c) Maintenance of Manufacturing Facilities. During the Term of this Agreement, CyDex shall, and shall cause Third-Party Manufacturers to, maintain the Manufacturing Facilities, all personal property, equipment, machinery, CAPTISOL, raw materials, systems, intangibles, intellectual property and contract rights in use at the Manufacturing Facilities during the Term in the ordinary course of business, in compliance with cGMPs and applicable laws, rules and regulations.

(d) Inspection. CyDex shall permit no more than [***] of Prism's authorized representatives, during normal working hours and upon reasonable prior notice to CyDex but in no event with less than [***] days prior notice, to inspect that portion of all CyDex facilities utilized for the manufacture, preparation, processing, storage or quality control of CAPTISOL or such facilities of any Third-Party Manufacturer, free of charge, no more frequently than [***] per calendar year except for Cause (as defined below). If Prism conducts additional inspections, CyDex [***] a [***] in an [***] agreed on by the parties in advance if

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such inspection is of a CyDex facility and [***] for any [***] to CyDex by the Third-Party Manufacturer for Prism's inspection of a Third-Party Manufacturer's facilities; *provided, however,* that Prism shall not be obligated to [***] for [***] to CyDex by the Third-Party Manufacturer for CyDex personnel who accompany Prism's authorized representatives during such inspection. Each of Prism's authorized personnel shall be authorized to conduct such manufacturing audits, shall comply with all applicable rules and regulations relating to facility security, health and safety, and shall execute a written confidentiality agreement with terms at least as restrictive as those set forth in Section 14 of the License Agreement. In no event shall any such manufacturing audit exceed [***] days in duration, except for Cause. The term "Cause" means that Prism shall have a reasonable basis to believe that CyDex or the Third-Party Manufacturers shall have violated this Agreement or that CAPTISOL shall have failed to conform to the Specifications. Prism shall ensure that its authorized representatives conduct each manufacturing audit in such a manner as to not interfere with the normal and ordinary operation of CyDex or its Third-Party Manufacturer. Except as expressly set forth in this **Section 3.5**, neither Prism nor its Affiliates, sublicensees or their respective employees or representatives shall have access to CyDex's facilities or the facilities of any Third-Party Manufacturer.

(e) Documentation. CyDex shall, and shall cause the Third-Party Manufacturers to maintain in accordance with, and for the period required under, prudent industry standards, cGMPs and applicable laws, rules and regulations complete and adequate records pertaining to the methods and facilities used for the manufacture of CAPTISOL. Prism shall have the right to examine such records; provided, that such records will be deemed Confidential Information and subject to confidentiality and non-use obligations pursuant to **Section 14** of the License Agreement.

3.6 Inability to Supply.

(a) Notice. CyDex shall notify Prism if CyDex is unable to supply or to timely supply the quantity of (i) Commercial Grade CAPTISOL ordered by Prism or (ii) Research Grade CAPTISOL or Clinical Grade CAPTISOL ordered by Prism as set forth in **Section 3.1(d)** above: (1) as soon as possible and in no event later than [***] days after CyDex's receipt of a purchase order for Commercial Grade CAPTISOL (with respect to the quantity that is within the Purchase Volume Limitations) and in no event later than [***] days after CyDex's receipt of a purchase order for Research Grade CAPTISOL, Clinical Grade CAPTISOL, or Commercial Grade CAPTISOL (in the latter case, with respect to the quantity that exceeds the Purchase Volume Limitations); or (2) immediately upon becoming aware of an event of *Force Majeure* that would render CyDex unable to supply or to timely supply to Prism the quantity of CAPTISOL that CyDex is required to supply hereunder.

(b) Allocation. Subject to **Section 3.6(c)**, CyDex (i) shall allocate its available CAPTISOL among Prism and any other purchasers of CAPTISOL with which CyDex then has an on-going contractual relationship, in proportion to the quantity of CAPTISOL for

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which each of them has orders pending at such time and (ii) shall take all reasonable steps necessary to minimize supply delays; provided in no event shall any other purchaser be granted priority of supply over Prism with respect to Commercial Grade CAPTISOL.

(c) Shortage of Supply and Back-Up Manufacturing Rights. Each party hereby acknowledges that a material failure in the CAPTISOL supply chain may adversely affect the supply of the Licensed Product, which may have severe regulatory consequences to both parties since the Licensed Product may be viewed as a critical medication both clinically and by the applicable governmental and regulatory authorities. If (1) CyDex fails to timely supply to Prism at least [***] of the quantities of CAPTISOL properly forecasted and ordered by Prism (and provided such order was within the Purchase Volume Limitations) that conform to the Specifications and cGMPs for [***] or (2) CyDex is unable to supply or to timely supply to Prism the quantity of CAPTISOL that CyDex is required to deliver to Prism pursuant to accepted purchase orders due to an event of *Force Majeure* that lasts for more than [***] days (each, a **"Failure to Supply")**, then the following provisions shall be applicable:

(i) Alternate Facility. At Prism's written request, CyDex shall [***] with [***] the [***] the [***] be [***] to [***] the [***] for the [***].

(ii) Alternate Supplier. At Prism's written request, CyDex shall [***] with [***] the [***] the [***] be [***] to [***] for the [***], the of [***] with [***] to [***].

(iii) Transfer of Manufacturing Technology. Prism may, by providing written notice of the occurrence of such Failure to Supply, elect to assume manufacturing of CAPTISOL under its Manufacturing License (as defined below). In the event Prism elects to use another supplier to manufacture and supply CAPTISOL pursuant to this **Section 3.6(c)**, CyDex, within [***] days of receipt of Prism's written notice, or during such longer period as may be reasonably necessary, shall provide Prism with the documentation, know-how and technical information that is necessary to make and have made CAPTISOL. To the extent practicable, CyDex shall continue to supply Prism with its needs of CAPTISOL under the terms of this Agreement until Prism is capable of doing so.

(iv) Documentation to be Provided by CyDex. In particular, in connection with the transfer of the manufacturing technology for CAPTISOL, CyDex shall provide the following to Prism: (1) copies of flow charts of the manufacturing procedures and work instructions related to manufacturing CAPTISOL; (2) a list of all equipment, including the source of the equipment, utilized in the production of CAPTISOL; (3) copies of all current Specifications; (4) copies of all standard operating procedures for the manufacturing procedures

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to be transferred; (5) all necessary environmental conditions necessary to manufacture CAPTISOL and copies of any existing external environmental impact studies based on the materials or methods employed in the manufacturing method to be transferred; and (6) such other documentation as the parties may agree, in each case of the foregoing subclauses (1) through (6), that are necessary to make and have made CAPTISOL.

(v) Access to Personnel. CyDex shall make available to Prism, for a reasonable period of time, the assistance of CyDex's employees and available external Third- Party Manufacturer's resources to support the transfer of the manufacturing technology to Prism. CyDex shall use commercially reasonable efforts to ensure that these personnel will reasonably cooperate with Prism in the implementation of the manufacturing technology until such implementation has been completed successfully.

(d) Manufacturing License. CyDex hereby grants to Prism a non-exclusive, non-transferable license (without the right to sublicense) under all intellectual property rights by CyDex that are needed to manufacture CAPTISOL in the same manner as manufactured by the Third-Party Manufacturers solely to make, or to have made, CAPTISOL for the purpose of manufacturing Prism's requirements of CAPTISOL for use in the manufacture of the Licensed Product in the Territory ("**Manufacturing License**") for the remainder of the Term; provided that such Manufacturing License shall not be exercised until the occurrence of a Failure to Supply. For clarity, the Manufacturing License shall not include the right to make CAPTISOL for any other product or for any third party and Prism's exercise of the Manufacturing License and the back-up manufacturing right pursuant to **Section 3.6(c)** hereof shall not be deemed a violation of this Agreement or the License Agreement and thereafter Prism shall not be required to purchase any of its requirement of CAPTISOL under either this Agreement or the License Agreement.

(e) Non-exclusive Remedy. Subject to Article 9, the remedy set forth in this **Section 3.6** shall be in addition to, not in place of, any other remedies available to Prism under law or at equity against CyDex's breach of this Agreement.

4. PRICING AND PAYMENT.

4.1 CAPTISOL Pricing. The initial purchase prices for CAPTISOL are as specified in ***Exhibit B*** attached hereto and such prices are subject to adjustment pursuant to this **Section 4.1.**

(a) CyDex's Right to Increase the Prices. CyDex reserves the right to increase the purchase prices set forth on ***Exhibit B*** on each January 1 during the Term, starting [***], by written notice to Prism, by a percentage equal to [***], if any, in the [***] for the [***]-month period ending October 31 of the prior year. CyDex shall notify Prism of such increase, together with the supporting information, within [***] days of the publication of the [***]

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(b) Prism's Failure to Place a Purchase Order. Subject to **Section 12.4**, if Prism fails to place a firm purchase order for any Q1 for a quantity of Commercial Grade CAPTISOL to be delivered during such Q1 equal to or greater than the quantity of Commercial Grade CAPTISOL Prism is obligated to purchase pursuant to the applicable Detailed Forecast, Prism shall reimburse CyDex for all reasonable costs and expenses incurred by CyDex in reliance upon Prism's binding obligation; provided that CyDex shall use commercially reasonable efforts to mitigate any loss or cost it may incur by selling such quantity of Commercial Grade CAPTISOL to its other customers and using the raw materials and supplies of CAPTISOL acquired in contemplation of fulfilling such Prism order to manufacture CAPTISOL for CyDex's other customers of CAPTISOL.

4.2 Invoicing; Payment. CyDex shall invoice Prism upon shipment of each order of CAPTISOL. All invoices shall be sent to the address specified in the applicable purchase order, and each invoice shall state the purchase price for CAPTISOL in such shipment, plus any documented insurance, shipping costs or other costs incidental to such purchase or shipment initially paid by CyDex but agreed in advance by Prism in writing to be borne by Prism hereunder; *provided, however,* that if such documented insurance, shipping costs or other costs incidental to such purchase or shipment initially paid by CyDex but agreed in advance by Prism in writing to be borne by Prism are not known at the time CyDex invoices Prism for the purchase price for the CAPTISOL ordered by Prism, CyDex may invoice such costs at a later date. Payment of such invoices shall be made within [***] days after the date thereof.

4.3 Currency; Taxes. All amounts due hereunder are stated in and shall be paid in, U.S. dollars, Prism shall pay all federal, state and local sales taxes (including any value added taxes in the event Prism requests CyDex to deliver CAPTISOL to international destinations) with respect to its purchase of CAPTISOL and CyDex shall pay income taxes and all other taxes other than the federal, state and local sales taxes (or value added taxes in the event Prism requests CyDex to deliver CAPTISOL to international destinations) with respect to its manufacture, sale and delivery of CAPTISOL. Each party shall indemnify and hold the other party harmless from any and all taxes for which it is responsible and any actions brought against the other party by any taxing authority with respect to such taxes.

4.4 Late Payments. Unpaid and undisputed balances shall accrue interest, from the due date until paid, at a rate equal to the lesser of (a) the prime rate, as reported in *The Wall Street Journal,* Eastern U.S. Edition, on the date such payment is due, plus an additional two percent (2%) or (b) the maximum rate permitted under applicable law. If any amount due hereunder and not subject to a reasonable, good-faith dispute by Prism remains outstanding for more than [***] days after its due date, CyDex may, in addition to any other rights or remedies it may have, refuse to ship CAPTISOL hereunder except upon payment by Prism in advance.

5. REGULATORY MATTERS; ADVERSE EVENT REPORTING.

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5.1 Maintenance of DMF; Right to Reference. During the Term of this Agreement, CyDex shall maintain and update on a timely basis the DMF from time to time as appropriate or required in order to keep the DMF current and up to date and promptly notify Prism of any updates of the DMF. Prism shall have the right to reference the DMF solely in connection with Prism's regulatory filings submitted in connection with obtaining Marketing Approval for the Licensed Product.

5.2 Preclinical *In Vivo* Studies. If Prism wishes to conduct any preclinical *in vivo* study of the Licensed Product utilizing CAPTISOL as a single agent at doses greater than those set forth in ***Exhibit C,*** Prism shall notify CyDex of any such study and of the protocol therefor in writing at least [***] days prior to commencing such study. If CyDex determines in its reasonable good faith determination that such study would materially adversely affect a product utilizing CAPTISOL, CyDex shall notify Prism within [***] days of receipt of such notice and protocol from Prism, and the parties shall discuss and attempt to resolve the matter in good faith. If the parties cannot resolve such matter within [***] days after CyDex notifies Prism of such determination, then the dispute shall be presented to the Chief Executive Officer of each party, or his or her respective designee, for resolution. If the parties' chief executive officers, or their respective designees, cannot resolve the dispute within [***] days of being requested by a party to resolve such dispute, either party may initiate a short-form arbitration proceeding pursuant to **Section 12.2(b)** (Short-Form Arbitration) below. If CyDex determines in its reasonable good faith determination that such study would not materially adversely affect a product utilizing CAPTISOL, CyDex shall notify Prism within [***] days following receipt of Prism's notice. Prism agrees to (i) immediately inform CyDex if any adverse effects are observed and ascribed to CAPTISOL in any study conducted under this **Section 5.2**, and (ii) provide CyDex with copies of the final and full reports of all studies conducted under this **Section 5.2**, promptly upon completion thereof, which reports shall constitute Prism's Confidential Information, subject to Section 14 of the License Agreement.

5.3 Access to CAPTISOL Data. Each party shall have the right to reference and utilize all toxicology/safety and other relevant scientific data developed on CAPTISOL alone (and not in conjunction with a product formulation) by the other party, and in the case of Prism by Prism's sublicensees or Affiliates, in connection with such party's development and commercialization of CAPTISOL or compounds, at no cost to such party. Upon request by such party, the other party shall either provide such party with a copy of all such data or shall make such data accessible to such party at such times and locations mutually agreed upon by the parties.

5.4 CAPTISOL Information Submitted for Regulatory Review. Except as otherwise set forth herein, Prism shall be solely responsible for all communications with regulatory agencies in connection with the Licensed Product. Notwithstanding the foregoing, Prism shall provide CyDex with copies of the portions of all regulatory submissions containing CAPTISOL data alone (and not in conjunction with any product formulation) [***] days prior to submission and shall allow CyDex to review and comment upon said submissions. If CyDex

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determines in its reasonable good faith determination that any such submission would materially adversely affect another product utilizing CAPTISOL, CyDex shall notify Prism within [***] days of receipt of such submission, and the parties shall discuss and attempt to resolve the matter in good faith. If the parties cannot resolve such matter within [***] days after CyDex notifies Prism of such a determination, then the dispute shall be presented to the Chief Executive Officer of each party, or his or her respective designee, for resolution. If the parties' Chief Executive Officers, or their respective designees, cannot resolve the dispute within [***] days of being requested by a party to resolve such dispute, either party may initiate a short-form arbitration proceeding pursuant to **Section 12.2(b)** (Short-Form Arbitration) below.

5.5 Communication with Regulatory Authorities. Prism shall inform CyDex of Prism's meetings with the FDA (or other regulatory agencies in the Territory) regarding CAPTISOL alone. If Prism submits written responses to the FDA that include data on CAPTISOL alone, CyDex shall be permitted to review such written materials prior to submission. If CyDex reasonably objects to the contents of such written responses relating to CAPTISOL, the parties agree to cooperate in working toward a reasonable and mutually agreeable response.

5.6 Material Safety. CyDex shall provide Prism, in writing, from time to time, with (a) complete and accurate relevant information currently known to it regarding handling precautions, toxicity and hazards with respect to CAPTISOL, and (b) the then-current material safety data sheet for CAPTISOL and shall promptly provide Prism with all updates thereto. Subject to the foregoing, Prism is solely responsible for (i) use of all documentation provided by CyDex, including without limitation, use in any regulatory submission to the FDA or any other regulatory agency in the Territory, (ii) document control and retention, and (iii) determining the suitability of any documentation provided by CyDex hereunder for use in any regulatory submission.

5.7 Adverse Event Reporting. Each party shall adhere, and shall require that its Affiliates, sublicensees, co-marketers and distributors adhere, to all requirements of applicable law and regulations that relate to the reporting and investigation of any adverse event, including without limitation an unfavorable and unintended diagnosis, symptom, sign (including an abnormal laboratory finding), syndrome or disease, whether or not considered to be related to CAPTISOL or a product containing CAPTISOL, which occurs or worsens following administration of CAPTISOL or a product containing CAPTISOL. Each party shall provide the other party with copies of all reports of any such adverse event which is serious (any such adverse event involving CAPTISOL or a product containing CAPTISOL that results in death, is life-threatening, requires or prolongs inpatient hospitalization, results in disability, congenital anomaly or is medically important (i.e., may require other medical or surgical intervention to prevent other serious criteria from occurring)) which such party has reason to believe is associated with CAPTISOL or a product containing CAPTISOL within [***] business days following (i) such party's submission of any such report to any regulatory agency, or (ii) receipt from such party's sublicensee, customer, co-marketer or distributor of any such report to any

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regulatory agency. Each party shall also advise the other party regarding any proposed labeling or registration dossier changes affecting CAPTISOL. Reports from a party shall be delivered to the attention of Vice President, Chief Scientific Officer of the other party, with a copy to Chief Executive Officer, of the other party, at the address set forth in **Section 12.5** hereof. The parties shall cooperate with each other with regard to investigation of any such serious adverse event, whether experienced by Prism, CyDex or any other Affiliate, sublicensee, customer, co-marketer or distributor of CyDex or Prism.

5.8 Product Recalls. If any CAPTISOL should be alleged or proven not to meet the Specifications, the party that becomes first aware of such shall notify the other party immediately, and both parties shall cooperate fully regarding the investigation and disposition of any such matter. If Prism should deem it appropriate to recall the Licensed Product and such recall is due to the failure of CAPTISOL to conform to the relevant Specifications or comply with the cGMPs at the time of delivery by CyDex, then CyDex agrees, upon substantiation thereof, to bear all reasonable costs associated with said recall, including refund of the purchase price for such CAPTISOL and the actual cost of conducting the recall in accordance with the recall guidelines of the applicable governmental authority. Prism shall in all events be responsible for conducting any such recalls with respect to the Licensed Product and shall maintain records of all sales of Licensed Product and customers sufficient to adequately administer any such recall, for a period of [***] years after expiration or termination of this Agreement.

6. CONFIDENTIALITY.

6.1 Confidentiality. The provisions of **Section 14** of the License Agreement are incorporated herein by reference as if fully set forth herein.

6.2 Third Party Information. Prism acknowledges that CyDex's Confidential Information includes information developed by Pfizer, Inc. that is confidential to both CyDex and Pfizer. In so far as Confidential Information of Pfizer, Inc. is disclosed, Pfizer, Inc. is a third-party beneficiary of this **Article 6** of this Agreement and may enforce it or seek remedies pursuant to it in accordance with its terms.

7. REPRESENTATIONS AND WARRANTIES.

7.1 Mutual Representations and Warranties. Each party represents and warrants to the other as follows:

(a) it is a corporation duly organized and validly existing under the laws of the state or country of its incorporation;

(b) it has the complete and unrestricted power and right to enter into this Agreement and to perform its obligations hereunder;

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(c) this Agreement has been duly authorized, executed and delivered by such party and constitutes a legal, valid and binding obligation of such party enforceable against such party in accordance with its terms except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, receivership, moratorium, fraudulent transfer, or other similar laws affecting the rights and remedies of creditors generally and by general principles of equity;

(d) the execution, delivery and performance of this Agreement by such party do not conflict with any agreement, instrument or understanding, oral or written, to which such party is a party or by which such party may be bound, nor violate any law or regulation of any court, governmental body or administrative or other agency having authority over such party; and

(e) all consents, approvals and authorizations from all governmental authorities or other third parties required to be obtained by such party in connection with the execution and delivery of this Agreement have been obtained.

7.2 Limited Warranty. CyDex represents, warrants and covenants to Prism that:

(a) all CAPTISOL will be and is (as of the time of delivery) manufactured in accordance with and conform to the respective Specifications (as applicable for Research Grade CAPTISOL, Clinical Grade CAPTISOL or Commercial Grade CAPTISOL), cGMPs, all applicable laws, rules and regulations, and any further manufacturing, packaging or other standards agreed upon in writing by the parties and all CAPTISOL delivered under this Agreement will be and is (as of the time of delivery) free and clear of all liens and encumbrances will not be and is not (as of the time of delivery) adulterated or misbranded and will have and has (as of the time of delivery) a shelf life of at least [***] years;

(b) the operation of the Primary Manufacturing Facility is and will be at all times during the Term of this Agreement and the Back-up Manufacturing Facility will, when used, be in compliance with the cGMP and all applicable laws, rules and regulations (including the receipt and possession of all applicable permits and authorizations), and any further manufacturing, packaging or other standards agreed upon in writing by the parties;

(c) CyDex has not and will not use in any capacity the services of any persons debarred or convicted under 21 U.S.C. § 335(a) or 335(b) in supplying CAPTISOL to Prism; none of the Third Party Manufacturer is a person debarred or convicted under 21 U.S.C. § 335(a) or 335(b) and CyDex has contractually required the Third Party Manufacturers not to use in any capacity the services of any person debarred or convicted under 21 U.S.C. § 335(a) or 335(b);

(d) CyDex has the right to grant the Manufacturing License pursuant to **Section 3.6(d)** hereof;

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(e) as of the Effective Date to CyDex's knowledge, without any further investigation or analysis, the supplying of CAPTISOL by CyDex (including the manufacturing of CAPTISOL by the Third-Party Manufacturers for such supply) does not infringe any intellectual property rights of any third party; and

(f) CyDex will not enter into any agreement or arrangement with any party which will prevent it from performing or impair its ability to performing its obligations under this Agreement.

7.3 Disclaimer. THE WARRANTIES SET FORTH IN THIS **ARTICLE 7** ABOVE ARE PROVIDED IN LIEU OF, AND EACH PARTY HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS.

8. INDEMNIFICATION.

8.1 By CyDex. CyDex shall defend, indemnify and hold Prism and its Affiliates and sublicensees, and each of their respective directors, officers and employees, harmless from and against any and all losses, damages, liabilities, costs and expenses (including the reasonable costs and expenses of attorneys and other professionals) (collectively "**Losses**") incurred by Prism as a result of any claim, demand, action or other proceeding (each, a "**Claim**") by a third party, to the extent such Losses arise out of (a) CyDex's breach of any of its representations, warranties, covenants or obligations pursuant to this Agreement, (b) the negligence or willful misconduct by CyDex or its Affiliates or Third-Party Manufacturers or their respective officers, directors, employees, agents or consultants in performing any obligations under this Agreement, or (c) failure of CyDex (or its Affiliates or Third-Party Manufacturers) to comply with cGMPs, applicable Specifications or applicable laws, rules or regulations in connection with the manufacture, storage, handling and delivery of CAPTISOL supplied to Prism hereunder; *provided, however,* that in each of the foregoing subclauses (a) through (c), CyDex shall be relieved of its obligations under this Section 8.1 to the extent such Claims arise out of any of the conditions specified in **Section 8.2** below.

8.2 By Prism. Prism shall defend, indemnify and hold CyDex and its Affiliates, and each of their respective directors, officers and employees, harmless from and against any and all Losses incurred by CyDex as a result of any Claim by a third party, to the extent such Losses arise out of (a) the development, manufacturing, use, handling, advertising, promotion, marketing or sale of Licensed Products by Prism, its Affiliates, sublicensees, distributors, agents, or other parties, (b) Prism's breach of any of its representations, warranties, covenants or obligations pursuant to this Agreement, or (c) the negligence or willful misconduct by Prism or its Affiliates or their respective sublicensees in performing any obligations under this Agreement; *provided, however,* that in each of the foregoing subclauses (a) through (c), Prism shall be relieved of its obligations under this **Section 8.2** to the extent such claims arise out of any of the conditions specified in **Section 8.1** above.

8.3 Expenses. As the parties intend complete indemnification, all costs and expenses of enforcing any provision of this **Article 8** shall also be reimbursed by the indemnifying party.

8.4 Procedure. The party intending to claim indemnification under this **Article 8** (an **"Indemnitee"**) shall promptly notify the other party (the "**Indemnitor**") of any Claim in respect of which the Indemnitee intends to claim such indemnification, and the Indemnitor shall assume the defense thereof whether or not such Claim is rightfully brought; *provided*, *however*, that an Indemnitee shall have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnitee, unless Indemnitor does not assume the defense, in which case the reasonable fees and expenses of counsel retained by the Indemnitee shall be paid by the Indemnitor. The Indemnitee, and its employees and agents, shall cooperate fully with the Indemnitor and its legal representatives in the investigations of any Claim.

9. LIMITATION OF LIABILITY.

EXCEPT FOR DAMAGES FOR WHICH A PARTY IS RESPONSIBLE PURSUANT TO ITS INDEMNIFICATION OBLIGATIONS SET FORTH IN **ARTICLE 8** ABOVE OR FOR A BREACH OF A PARTY'S OBLIGATIONS OF CONFIDENTIALITY SET FORTH IN **ARTICLE** 6, (I) EACH PARTY SPECIFICALLY DISCLAIMS ALL LIABILITY FOR AND SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, EXPENSES, LOST PROFITS, LOST SAVINGS, INTERRUPTIONS OF BUSINESS OR OTHER DAMAGES OF ANY KIND OR CHARACTER WHATSOEVER ARISING OUT OF OR RELATED TO THIS AGREEMENT OR RESULTING FROM THE MANUFACTURE, HANDLING, MARKETING, SALE, DISTRIBUTION OR USE OF CAPTISOL OR THE LICENSED PRODUCT, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE, EVEN IF THE OTHER PARTY WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND (II) [***] FOR [***] OF [***] TO [***] OF (A) [***] [***], (B) [***] BY [***] THE [***] AND [***] FOR [***] AND [***], IN EACH CASE, DURING THE [***] THE [***] TO [***] AND (C) THE [***] BY [***] THE [***] AND THIS [***] FOR [***] AND THE [***] IN EACH CASE, DURING THE [***] IMMEDIATELY [***] THE [***] TO [***]. NEITHER PARTY SHALL HAVE ANY REMEDY OTHER THAN AS EXPRESSLY SET FORTH IN THIS AGREEMENT. NO ACTION, REGARDLESS OF FORM, ARISING OUT OF OR RELATED TO THIS AGREEMENT MAY BE BROUGHT BY EITHER PARTY MORE THAN [***] YEARS AFTER SUCH PARTY HAS KNOWLEDGE OF THE OCCURRENCE THAT GAVE RISE TO THE CAUSE OF SUCH ACTION.

10. INSURANCE.

CyDex shall maintain product liability insurance at all times during the Term of this Agreement with respect to CAPTISOL and its obligations hereunder. Such insurance shall be in such amounts and on such terms as may be the standard prevailing in the industry at the time, but

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in no event less than [***] dollars [***]. CyDex will provide to Prism evidence of such insurance coverage upon Prism's request. CyDex shall not change or modify its insurance without Prism's prior consent, which consent shall not be unreasonably withheld. CyDex further agrees to cause such policy to name Prism as an additional insured without cost to Prism.

11. TERM AND TERMINATION.

11.1 Term. The term of this Agreement shall commence on the Effective Date and shall continue in effect thereafter until the expiration of the License Agreement, unless terminated earlier as set forth herein for a minimum period of five (5) years following the Effective Date (the **"Initial Term")**. Unless otherwise terminated pursuant to the terms hereof, this Agreement shall be automatically renewed annually thereafter, unless either party provides written notice of termination to the other at least [***] months prior to the end of the Initial Term or any renewal term. The Initial Term and any renewal term are collectively referred to herein as the **"Term**."

11.2 Termination for Cause. If a party should violate or fail to perform any term or covenant of this Agreement, then the other party may give written notice of such default (a "**Notice of Default**") to the breaching party. If the breach party should fail to cure such default within [***] days of the date of such notice or prior to the natural expiration date of this Agreement, whichever is shorter in duration, the other party shall have the right to terminate this Agreement by a second written notice (a "**Notice of Termination**") to the breaching party. If a Notice of Termination is sent to a party, this Agreement shall automatically terminate on the effective date of such notice. In addition, each party may terminate this Agreement immediately upon written notice to the other party in the event the other party makes an assignment for the benefit of creditors or has a petition in bankruptcy filed for or against it that is not dismissed within [***] days of such filing.

11.3 Termination with License Agreement. This Agreement shall automatically terminate upon the expiration or termination, for whatever reason, of the License Agreement.

11.4 Termination for *Force Majeure* Event. Notwithstanding anything to the contrary contained in this Agreement, if an event of *Force Majeure* shall have occurred and be continuing for [***] days, the party not suffering such event of *Force Majeure* shall be entitled to terminate this Agreement effective immediately upon written notice to the party suffering such event of *Force Majeure*.

11.5 Termination for Regulatory Reasons. Prism shall have the right to terminate the Agreement (in whole or in part) at any time by giving [***] business days prior written notice to CyDex if any applicable governmental or regulatory authority that regulates CAPTISOL or the Licensed Product takes any action the result of which is to prohibit the manufacture, sale or use or any similar action of the Licensed Product or any raw material

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contained therein or to impose significant restriction on the manufacture, sale or use or any similar action of CAPTISOL or the Licensed Product.

11.6 Return of Confidential Information. Following the termination or expiration of this Agreement, each party shall promptly return all relevant records and materials in its possession or control containing the other party's Confidential Information with respect to which the other party does not retain rights hereunder; *provided, however,* that each party may retain one archival copy of such records and materials solely to be able to monitor its obligations that survive under this Agreement.

11.7 Pending Purchase Orders. Except in cases of the termination of this Agreement for an event of *Force Majeure* in accordance with **Section 11.4**, the termination of this Agreement shall not affect purchase orders placed by Prism at the time a Notice of Termination is given and until the time any such termination becomes effective and CyDex shall immediately suspend and cause to be suspended all manufacturing activities hereunder except the activities for fulfilling Prism's outstanding purchase orders. Except its obligation to make payment with respect to such outstanding purchase orders pursuant to this Agreement, Prism shall have no liability to CyDex for any costs that CyDex may have incurred (or to which CyDex may be committed) in connection with materials used by CyDex in the manufacturing or packaging of CAPTISOL prior to the effectiveness of any notice of termination in connection with any termination other than (a) termination by CyDex for cause in accordance with **Section 11.2** or (b) termination by Prism for regulatory reasons in accordance with **Section 11.5** if the governmental or regulatory action giving rise to such termination was specific to the Licensed Product and not to CAPTISOL generally; provided that any costs of materials that Prism may be responsible for as a result of termination described in sub-clause (a) or (b) in the foregoing shall be limited to the costs of materials, if any, used by CyDex in its good faith reliance on Prism's forecast in manufacturing or packaging such quantity of CAPTISOL for the Q2 as set forth in the Detailed Forecast submitted by Prism prior to the Notice of Termination.

11.8 Survival. Notwithstanding any other provisions of this Agreement, any liability or obligation of either party to the other for acts or omissions prior to the termination or expiration of this Agreement shall survive the termination or expiration of this Agreement. Such termination or expiration shall not relieve either party from obligations that are expressly indicated to survive termination or expiration of this Agreement, nor shall any termination or expiration of this Agreement relieve Prism of its obligation to pay CyDex sums due in respect of CAPTISOL shipped prior to termination or expiration of this Agreement, subject to **Section 3.4**. **Sections 3.4** (Quality Control; Acceptance and Rejection), **4.1** (Pricing), **4.3** (Currency; Taxes), **4.4** (Late Payments), **5.7** (Adverse Event Reporting), **5.8** (Product Recalls), **11.6** (Return of Confidential Information), **11.7** (Pending Purchase Orders), **11.8** (Survival) and **Articles 1** (Definitions), **6** (Confidentiality), **7** (Representations and Warranties, solely to the extent the representations, warranties and covenants apply to the period prior to the termination or expiration of this Agreement), **8** (Indemnification), **9** (Limitation of Liability), and **12** (General Provisions) shall survive termination or expiration of this Agreement.

12. GENERAL PROVISIONS.

12.1 Relationship of Parties. Each of the parties hereto is an independent contractor and nothing in this Agreement is intended or shall be deemed to constitute a partnership, agency, employer-employee or joint venture relationship between the parties. No party shall incur any debts or make any commitments for the other.

12.2 Arbitration.

(a) Procedure. Except as otherwise expressly set forth in **Section 12.2(b)** below, any and all controversies, disputes or claims arising out of, in connection with, or relating to the interpretation, performance or breach of this Agreement, or any amount due hereunder, including without limitation, any claim based on contract, tort or statute shall be settled as follows:

(i) The Management Committee (as defined in **Section 3.1** of the License Agreement) shall, initially meet to attempt to resolve the dispute;

(ii) If the Management Committee cannot resolve such dispute within [***] days after either party requests such a meeting, then either party may request that the Chief Executive Officer of each party meet to attempt to resolve such dispute;

(iii) If the Chief Executive Officers cannot resolve such dispute within [***] days after either party requests such a meeting, then such controversy, dispute or claim shall be settled solely and exclusively by arbitration.

Any arbitration pursuant to this **Section 12.2(a)** shall be conducted in [***] before and in accordance with the then existing Commercial Dispute Resolution Procedures through the American Arbitration Association, using an arbitrator mutually selected by CyDex and Prism from a list of those designated by the American Arbitration Association, or if the parties disagree, otherwise appointed by the American Arbitration Association. At any time, a party may seek or obtain preliminary, interim or conservatory measures from the arbitrators or from a court. Any arbitration shall be final and binding. The findings shall be delivered in a written opinion with findings of fact based on the record. Any judgment upon any interim or final award or order rendered by the arbitrator may be entered by any state or federal court having jurisdiction thereof. The parties intend that with respect to any arbitration proceeding commenced hereunder, each party shall bear such party's own costs and expenses (including expert witness and attorneys' fees) of investigating, preparing, and pursuing such arbitration claim. Notwithstanding the foregoing, neither party shall be bound to follow the dispute resolution process described in this **Section 12.2(a)** with respect to any dispute, controversy or claim for which interim equitable relief from a court is necessary to prevent serious and irreparable injury to a party.

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(b) Short-Form Arbitration. Any dispute subject to short-form arbitration as provided in this Agreement shall be finally settled by binding arbitration conducted, in accordance with the rules of the American Arbitration Association then in effect, in [***] if such proceeding is initiated by Prism or in Philadelphia, Pennsylvania if such the proceeding is initiated by CyDex, by a single arbitrator mutually selected by CyDex and Prism from a list of those designated by the American Arbitration Association, or if the parties disagree, otherwise appointed by the American Arbitration Association. Such arbitrator shall make his or her determination on the basis of "baseball arbitration" principles. THE FOREGOING REMEDY SHALL BE EACH PARTY'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO ANY SUCH DISPUTE. The expenses of any arbitration, including the reasonable attorneys' fees of the prevailing party, shall be borne by the party deemed to be at fault or on a pro-rata basis should the arbitration conclude in a finding of mutual fault. In each case, the parties and arbitrator shall use all diligent efforts to complete such arbitration within [***] days of appointment of the arbitrator.

(c) Confidentiality of Proceedings. All arbitration proceedings hereunder shall be confidential and the arbitrator(s) shall issue appropriate protective orders to safeguard each party's Confidential Information. Except as required by law, no party shall make (or instruct the arbitrator(s) to make) any public announcement with respect to the proceedings or decision of the arbitrator(s) without prior written consent of the other party.

12.3 Costs and Expenses. Except as otherwise expressly provided in this Agreement, each party shall bear all costs and expenses associated with the performance of such party's obligations under this Agreement.

12.4 Force Majeure. Subject to **Section 11.4**, neither party shall be liable for failure to perform, or delay in the performance of, its obligations under this Agreement (other than payment obligations) when such failure or delay is caused by an event of *Force Majeure.* If, due to any event of *Force Majeure,* either party shall be unable to fulfill its obligations under this Agreement (other than payment obligations), the affected party shall immediately notify the other party of such inability and of the period during which such inability is expected to continue and shall immediately assume its performance once the conditions causing the event of *Force Majeure* cease to exist.

12.5 Notices. Any notice, request, or communication under this Agreement shall be effective only if it is in writing and personally delivered; sent by certified mail, postage pre-paid; facsimile with receipt confirmed; or by nationally recognized overnight courier with signature required, addressed to the parties at the addresses stated below or such other persons and/or addresses as shall be furnished in writing by any party in accordance with this **Section 12.5**. Unless otherwise provided, all notices shall be sent:

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If to CyDex:

Attention: John M. Siebert Ph.D.
President and CEO
CyDex, Inc.
10513 W. 84th Terr.
Lenexa, Kansas 66214

If to Prism:

Attention: Warren D. Cooper
President and CEO
Prism Pharmaceuticals, Inc
1150 First Ave, Suite 1050,
King of Prussia, PA 19406

with a copy to:

Morgan Lewis & Bockius, LLP
Attn: Stephen A. Jannetta, Esq.
1701 Market Street
Philadelphia, PA 19103

If sent by facsimile transmission, the date of transmission shall be deemed to be the date on which such notice, request or communication was given. If sent by overnight courier, the next business day after the date of deposit with such courier shall be deemed to be the date on which such notice, request or communication was given. If sent by certified mail, the third business day after the date of mailing shall be deemed the date on which such notice, request or communication was given.

12.6 Use of Name. Without the other party's prior written consent, neither party shall have any right, express or implied, to use in any manner the name or other designation of the other party or any other trade name or trademark of the other party for any purpose, except as may be required by applicable law or regulation.

12.7 Public Announcements. Except for such disclosure as is deemed necessary, in the reasonable judgment of a party, to comply with applicable laws or regulations, no announcement, news release, public statement, publication, or presentation relating to the existence of this Agreement, or the terms hereof, will be made without the other party's prior written approval, which approval shall not be unreasonably withheld. Notwithstanding the above, once the content and timing of a public announcement of the fact that the parties have entered into this Agreement has been agreed to between the parties and such announcement has been made, each party shall be free to disclose to third parties the fact that it has entered into the Agreement with the other party, as well as any other information contained in said public announcement. In the event of a public announcement required to be made to comply with applicable laws or regulations, the party making such announcement shall provide the other party with a copy of the proposed text prior to such announcement sufficiently in advance of the scheduled release of such announcement to afford such other party a reasonable opportunity to review and comment upon the proposed text and the timing of such disclosure and seek confidential treatment thereof.

12.8 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware (without giving effect to any conflicts of law principles that require the application of the law of a different state).

12.9 Entire Agreement; Amendment. This Agreement, the License Agreement and all Exhibits attached hereto or thereto contain the entire agreement of the parties relating to the subject matter hereof and supersede any and all prior agreements, written or oral, between CyDex and Prism relating to the subject matter of this Agreement. This Agreement may not be amended unless agreed to in writing by both parties.

12.10 Binding Effect. This Agreement shall be binding upon, and the rights and obligations hereof shall apply to CyDex and Prism and their successor(s) and permitted assigns. The name of a party appearing herein shall be deemed to include the names of such party's successors and permitted assigns to the extent necessary to carry out the intent of this Agreement.

12.11 Waiver. The rights of either party under this Agreement may be exercised from time to time, singularly or in combination, and the exercise of one or more such rights shall not be deemed to be a waiver of any one or more of the other. No waiver of any breach of a term, provision or condition of this Agreement shall be deemed to have been made by either party unless such waiver is addressed in writing and signed by an authorized representative of that party. The failure of either party to insist upon the strict performance of any of the terms, provisions or conditions of this Agreement, or to exercise any option contained in this Agreement, shall not be construed as a waiver or relinquishment for the future of any such term, provision, condition or option or the waiver or relinquishment of any other term, provision, condition or option.

12.12 Severability. If a final judicial determination is made that any provision of this Agreement is unenforceable, this Agreement shall be rendered void only to the extent that such judicial determination finds such provision unenforceable, and such unenforceable provision shall be automatically reconstituted and become a part of this Agreement, effective as of the date first written above, to the maximum extent they are lawfully enforceable.

12.13 Assignment. Neither party may assign its rights or delegate its obligations under this Agreement, in whole or in part to any third party without the prior written consent of the other party, which consent shall not be unreasonably withheld. Notwithstanding the foregoing, either party may assign its rights and delegate its obligations under this Agreement to an Affiliate or to a third party successor of such party, whether by way of merger, sale of all or substantially all of its assets, sale of stock or otherwise, without the other party's prior written consent. As a condition to any permitted assignment hereunder, the assignor must guarantee the performance of any assignee to the terms and obligations of this Agreement. Any assignment not in accordance with this **Section 12.13** shall be void.

12.14 Headings. The descriptive headings of this Agreement are for convenience only and shall be of no force or effect in construing or interpreting any of the provisions of this Agreement.

12.15 Counterparts. This Agreement may be executed in two counterparts, each of which shall constitute an original document, but both of which shall constitute one and the same instrument.

* * *

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

CYDEX, INC.

By: /s/ John M. Siebert

Name: John M. Siebert, Ph.D.

Title: President and CEO

PRISM PHARMACEUTICALS, INC.

By: /s/ Warren D. Cooper

Name: Warren D. Cooper

Title: President and CEO

EXHIBIT A

SPECIFICATIONS

CAPTISOL, Clinical and Commercial Grade

[***]

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

Exhibit B

Purchase Price for CAPTISOL
[***]

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

Exhibit C

Dosage of CAPTISOL in Single Agent
[***]

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

Exhibit 21.1

LIGAND PHARMACEUTICALS INCORPORATED
LIST OF SUBSIDIARIES

Name	Jurisdiction of Incorporation
Glycomed Incorporated	California
Allergan Ligand Retinoid Therapeutics, Inc.	Delaware
Ligand Pharmaceuticals International, Inc.	Delaware
Ligand JVR, Inc.	Delaware
Seragen Incorporated	Delaware
Seragen Technology, Inc.	Delaware
Pharmacopeia, LLC	Delaware
Metabasis Therapeutics, Inc.	Delaware
Neurogen Corporation	Delaware
CyDex Pharmaceuticals, Inc.	Delaware

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated March 3, 2011 with respect to the consolidated financial statements, schedule, and internal control over financial reporting included in the Annual Report of Ligand Pharmaceuticals Incorporated on Form 10-K for the year ended December 31, 2010. We hereby consent to the incorporation by reference of said reports in the Registration Statements of Ligand Pharmaceuticals, Incorporated on Forms S-8 (File No. 333-160132, effective June 22, 2009 and File No. 333-131029, effective June 18, 2007).

/s/ GRANT THORNTON LLP

San Diego, California
March 3, 2011

Exhibit 31.1

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

I, John L. Higgins, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: March 2, 2011

/S/ JOHN L. HIGGINS

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

Exhibit 31.2

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

I, John P. Sharp, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: March 2, 2011

/S/ JOHN P. SHARP

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

Exhibit 32.1

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

In connection with the accompanying Annual Report on Form 10-K of Ligand Pharmaceuticals Incorporated (the "Company") for the year ended December 31, 2010, I, John L. Higgins, President, Chief Executive Officer and Director of the Company, hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) such Annual Report on Form 10-K for the year ended December 31, 2010, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in such Annual Report on Form 10-K for the year ended December 31, 2010, fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is being furnished solely to accompany such Annual Report on Form 10-K for the year ended December 31, 2010, pursuant to 18 U.S.C. § 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Date: March 2, 2011

/S/ JOHN L. HIGGINS

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

Exhibit 32.2

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

In connection with the accompanying Annual Report on Form 10-K of Ligand Pharmaceuticals Incorporated (the "Company") for the year ended December 31, 2010, I, John P. Sharp, Vice President, Finance and Chief Financial Officer of the Company, hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) such Annual Report on Form 10-K for the year ended December 31, 2010, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in such Annual Report on Form 10-K for the year ended December 31, 2010, fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is being furnished solely to accompany such Annual Report on Form 10-K for the year ended December 31, 2010, pursuant to 18 U.S.C. § 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Date: March 2, 2011

/S/ JOHN P. SHARP

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