

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

Form 10-K

R ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934  
For the Fiscal Year Ended December 31, 2008

OR

£ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from to

Commission file number: 0-12957



(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)  
685 Route 202/206, Bridgewater, New Jersey  
(Address of principal executive offices)

22-2372868  
(I.R.S. Employer  
Identification No.)  
08807  
(Zip Code)

Registrant's telephone number, including area code:  
(908) 541-8600

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

Title of Class	Name of Exchange on Which Registered
Common Stock, \$0.01 par value;	NASDAQ Stock Market LLC
Preferred Stock Purchase Rights	

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 Exchange Act.  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 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 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.  Yes  No

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

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

The aggregate market value of the Common Stock, par value \$.01 per share ("Common Stock"), held by non-affiliates of the registrant was approximately \$316,101,000 as of June 30, 2008, based upon the closing sale price on the NASDAQ Stock Market of \$7.12 reported for such date. Shares of Common Stock held by each officer and director and by each person who owns 10% or more of the outstanding shares of Common Stock have been excluded in that such shares may be deemed to be owned by affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

There were 45,142,334 shares of the registrant's common stock issued and outstanding as of March 4, 2009.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed with the Commission not later than 120 days after the close of the registrant's fiscal year, have been incorporated by reference, in whole or in part, into Part III, Items 10, 11, 12, 13 and 14 of this Annual Report on Form 10-K.

ENZON PHARMACEUTICALS, INC.  
2008 Form 10-K Annual Report  
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Oncaspar®, Abelcet®, Adagen®, and SCA® are our registered trademarks. Other trademarks and trade names used in this report are the property of their respective owners.

This Annual Report contains forward-looking statements, which can be identified by the use of forward-looking terminology such as “believes,” “expects,” “may,” “will,” “should,” “potential” or “anticipates” or the negative thereof, or other variations thereof, or comparable terminology, or by discussions of strategy. No assurance can be given that the future results covered by the forward-looking statements will be achieved. The matters set forth in Item 1A. Risk Factors constitute cautionary statements identifying important factors with respect to such forward-looking statements, including certain risks and uncertainties that could cause actual results to vary materially from the future results indicated in such forward-looking statements. Other factors could also cause actual results to vary materially from the future results indicated in such forward-looking statements. All information in this Annual Report on Form 10-K is as of March 6, 2009, unless otherwise indicated. The Company does not intend to update this information to reflect events after the date of this report.

We maintain a website at [www.enzon.com](http://www.enzon.com) to provide information to the general public and our stockholders on our products, resources and services along with general information on Enzon and its management, career opportunities, financial results and press releases. Copies of our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our other reports filed with the Securities and Exchange Commission, or the SEC, can be obtained, free of charge as soon as reasonably practicable after such material is electronically filed with, or furnished to the SEC, from our Investor Relations Department by calling 908-541-8777, through an e-mail request to [investor@enzon.com](mailto:investor@enzon.com), through the SEC’s website by clicking the SEC Filings link from the Investors’ Info page on our website at [www.enzon.com](http://www.enzon.com) or directly from the SEC’s website at [www.sec.gov](http://www.sec.gov). Our website and the information contained therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

FORM 10-K  
ENZON PHARMACEUTICALS, INC.

PART I

ITEM 1. BUSINESS

GENERAL

We are a biopharmaceutical company dedicated to developing, manufacturing and commercializing important medicines for patients with cancer and other life-threatening conditions. We have a portfolio of four marketed products, Oncaspar®, DepoCyt®, Abelcet® and Adagen®. Our drug development programs utilize several innovative approaches, including our industry-leading PEGylation technology platform and the Locked Nucleic Acid (LNA) technology. Our PEGylation technology was used to develop two of our products, Oncaspar and Adagen, and has created a royalty revenue stream from licensing partnerships for other products developed using the technology. We also engage in contract manufacturing for several pharmaceutical companies to broaden our revenue base.

STRATEGY

We continue to pursue the comprehensive long-term strategic plan we developed in 2005. This plan was designed to strengthen our business, build long-term value and attain our goal of becoming a premier and novel biopharmaceutical company with a focus in cancer and other life-threatening diseases. To this end, we are executing a strategy that focuses on the following three phases of corporate priorities for the next several years: (i) strategically investing in research and development to advance our innovative pipeline, (ii) improving our organizational efficiencies and (iii) becoming a recognized leader in oncology and adjacent therapeutic areas.

Our strategy revolves around the following key imperatives:

*Focusing on innovation.* We are cultivating an organizational commitment to innovation by (i) investing in our technological base, (ii) growing our intellectual property estate and (iii) building a novel research and development pipeline of projects that are strategically focused with promising pathways to regulatory approval. We are committed to making targeted, disciplined investments in areas where we believe we can make a unique contribution and achieve differentiation. For instance, we have extensive know-how and a demonstrated track record in PEGylation, including our Customized Linker Technology™ platform. PEG is a proven means of enabling or enhancing the performance of pharmaceuticals with delivery limitations. We are committed to further evolving the potential of this technology and bringing new PEG product development opportunities forward, both through proprietary and externally-sourced programs.

*Maximizing the return on our asset base.* We are focused on leveraging our internal resources and infrastructure as a means of broadening our revenue base and improving our operational efficiencies. Over the past four years we have strengthened our cross-functional infrastructure. Our management team has extensive experience in the pharmaceutical industry, particularly in the development and commercialization of oncology products. In addition, we will seek to increase our contract manufacturing by leveraging our liposomal and PEGylation know-how that has broad clinical utility in a wide array of therapeutic areas and our manufacturing facility that has the capability of formulating complex injectable pharmaceutical products.

*Maintaining a high-performance, value-focused corporate culture.* We recognize that the successful execution of our long-term plan begins with ensuring that our employees understand the stated goals of the organization and are accountable for making meaningful contributions to our corporate results. We are cultivating a performance-driven culture, focused on delivering on our promises. We have also placed an increased emphasis on measuring and rewarding performance throughout the organization.

Our key initiatives to advance these priorities include:

- Lifecycle management is deployed as a critical organizational practice with plans underway for all of our marketed brands. We believe lifecycle management is an essential tool for building sustainability and maximizing value for our products. We continue to evaluate several new means of driving sustainable commercial success for our marketed products, including new therapeutic areas, modes of administration, manufacturing process and supply improvements and delivery mechanisms. We are in the process of improving the pharmaceutical properties for our Adagen and Oncaspar products. This will require a significant investment for the next few years.
- We continue to advance our research and development pipeline. In 2007, we advanced our PEG-SN38 and our HIF-1 alpha antagonist into Phase I human clinical trials. Current data from these studies demonstrate that the compounds are well tolerated and warrant further development. We expect to identify a dose and move into Phase II studies in 2009. In January 2009, we received acceptance of our Investigational New Drug (IND) application for our Survivin antagonist. We moved this compound into Phase I clinical trials in February 2009.
- We continue to evaluate opportunities for licensing our PEGylation technology to enhance compounds with delivery problems. We also remain open to in-licensing opportunities for compounds that have a strategic fit with our business, such as the Santaris agreement for the LNA targets, or partnering clinical programs when it is deemed appropriate.
- We continue to identify opportunities in our contract manufacturing business to (i) foster new contract manufacturing partnerships, (ii) enhance our current processes, (iii) broaden our manufacturing expertise and infrastructure and (iv) expand the utilization of our finish and fill capabilities.
- We continue to improve our capital structure. During 2008, we continued to improve our balance sheet by repurchasing and repaying \$76.9 million of our outstanding convertible debt. We repurchased or repaid the remaining \$72.4 million of our 4.5 percent convertible notes due in July 2008. In January 2009, we repurchased \$4.5 million principal amount of our 4 percent notes due in July 2013.

## PRODUCTS SEGMENT

Our Products segment includes the manufacturing, marketing and selling of pharmaceutical products for patients with cancer and other life-threatening diseases. We currently sell four therapeutic products, Oncaspar, DepoCyt, Abelcet and Adagen, through our U.S. sales force that calls upon specialists in oncology, hematology, infectious disease and other critical care disciplines.

### 1) *Oncaspar*

Oncaspar is a PEG-enhanced version of a naturally occurring enzyme called L-asparaginase derived from *E. coli*. Oncaspar is used in conjunction with other chemotherapeutics to treat patients with acute lymphoblastic leukemia (ALL). We developed Oncaspar internally and received U.S. marketing approval from the U.S. Food and Drug Administration (FDA) for Oncaspar in February 1994. We licensed rights to Oncaspar for North America and most of the Asia/Pacific region to Rhone-Poulenc Rorer, Inc. now part of Sanofi-Aventis. In June 2002, we licensed back those rights from Sanofi-Aventis.

L-asparaginase is an enzyme that depletes the amino acid asparagine, which certain leukemic cells are dependent upon for survival. Other companies market unmodified L-asparaginase for the treatment of ALL. The therapeutic value of unmodified L-asparaginase is limited by its short half-life, which requires frequent injections, and its propensity to cause a high incidence of allergic reactions. We believe that Oncaspar offers significant therapeutic advantages over unmodified L-asparaginase, namely a significantly increased half-life in blood allowing fewer injections, and fewer allergic reactions.

In October 2005, we amended our license agreement with Sanofi-Aventis for Oncaspar. The amendment became effective in January 2006 and included a significant reduction in our royalty rate, with a single-digit royalty percentage payable by us only on those aggregate annual sales of Oncaspar in the U.S. and Canada that are in excess of \$25.0 million. Under the amended agreement, we made an upfront cash payment of \$35.0 million to Sanofi-Aventis in January 2006 and the remaining \$5.0 million milestone due to the product having

achieved a prescribed level of sales was accrued in June 2008 (paid in January 2009). We are obligated to make royalty payments through June 30, 2014, at which time all of our royalty obligations will cease.

In November 2005, we received approval from the FDA for a labeling change for Oncaspar allowing for intravenous administration. Intravenous administration provides clinicians with a treatment option that will potentially reduce the number of injections for pediatric cancer patients who require Oncaspar in their treatment regimen. Previously, Oncaspar's administration was limited to intramuscular administration, which involves injecting the drug directly into the muscle and is often painful to patients.

In July 2006, we announced that the FDA had approved our supplemental Biologics License Application (sBLA) for Oncaspar for use as a component of a multi-agent chemotherapeutic regimen for the first-line treatment of patients with ALL, which we had submitted in November 2005. The FDA approved the new first-line indication for Oncaspar based on data from two studies conducted by the Children's Cancer Group (CCG), CCG-1962 and CCG-1991, with safety data from over 2,000 pediatric patients. The Children's Cancer Group is now incorporated under the Children's Oncology Group (COG).

In December 2006, we secured the supply of L-asparaginase, the raw material used in the production of Oncaspar. We are investing in the improvement of the manufacturing processes and pharmaceutical properties of Oncaspar. We are currently enrolling patients in a pivotal clinical trial utilizing the next generation Oncaspar. A significant investment will continue over the next few years. This investment is necessary for the continued supply of Oncaspar to patients. The next generation Oncaspar will allow for geographic expansion.

We manufacture Oncaspar in the U.S.

## **2) DepoCyt**

DepoCyt is an injectable chemotherapeutic agent approved for the treatment of patients with lymphomatous meningitis. It is a sustained release formulation of the chemotherapeutic agent, arabinoside cytarabine or ara-C. DepoCyt gradually releases cytarabine into the cerebral spinal fluid (CSF) resulting in a significantly extended half-life, prolonging the exposure to the therapy and allowing for more uniform CSF distribution. This extends the dosing interval to once every two weeks, as compared to the standard twice-weekly chemotherapy dosing of unencapsulated cytarabine. We acquired the U.S. and Canadian rights to DepoCyt from Pacira Pharmaceuticals, Inc. (Pacira), formerly SkyePharma, in December 2002.

Lymphomatous meningitis is a debilitating form of neoplastic meningitis, a complication of cancer that is characterized by the spread of cancer to the central nervous system and the formation of secondary tumors within the thin membranes surrounding the brain. Lymphomatous meningitis can affect all levels of the central nervous system, including the cerebral hemispheres, cranial nerves, and spinal cord. Symptoms can include numbness or weakness in the extremities, pain, sensory loss, double-vision, loss of vision, hearing problems, and headaches. Lymphomatous meningitis is often not recognized or diagnosed in clinical practice. Autopsy studies have found higher rates of lymphomatous meningitis than those observed in clinical practice. These autopsy studies suggest that 5% of all cancer patients will develop neoplastic meningitis during the course of their illness.

DepoCyt was originally approved under the Accelerated Approval regulations of Subpart H of the Federal Food, Drug and Cosmetic Act, intended to make promising products for life-threatening diseases available to the market on the basis of preliminary evidence prior to formal demonstration of patient benefit. After completing required post-approval trials for DepoCyt, in April 2007, the FDA granted full approval of DepoCyt for treatment of patients with lymphomatous meningitis.

Our sales and marketing programs are structured to enhance the commercial value of DepoCyt by expanding awareness of the symptoms and benefits of treating lymphomatous meningitis, and marketing programs that focus on the positive product attributes of DepoCyt as compared to unencapsulated cytarabine. We are also exploring the potential role of DepoCyt in other cancers that can spread to the central nervous system.

DepoCyt is manufactured in the U.S. by Pacira.

### **3) *Abelcet***

Abelcet is a lipid complex formulation of amphotericin B used primarily in the hospital to treat immuno-compromised patients with invasive fungal infections. It is indicated for the treatment of invasive fungal infections in patients who are intolerant of conventional amphotericin B therapy or for whom conventional amphotericin B therapy has failed. Abelcet provides patients with the broad-spectrum efficacy of conventional amphotericin B, while providing significantly lower kidney toxicity than amphotericin B.

We acquired the U.S. and Canadian rights to Abelcet from Elan Pharmaceuticals PLC (Elan) in November 2002. As part of the acquisition, we also acquired the operating assets associated with the development, manufacture, sales and marketing of Abelcet in the U.S. and Canada, including a 56,000 square foot manufacturing facility in Indianapolis, Indiana. In addition to U.S. and Canada distribution rights, we also acquired the rights to develop and commercialize the product in Japan.

Invasive fungal infections are life-threatening, often affecting patients with compromised immune systems, such as those undergoing treatment for cancer, recipients of organ or bone marrow transplants or patients infected with the Human Immunodeficiency Virus (HIV). Invasive fungal infections can be caused by a multitude of different fungal pathogens that attack the patient's weakened immune system. Effective treatment is critical and can mean the difference between life and death, and often must be initiated even in the absence of a specific diagnosis.

Over the past 20 years, there has been an increase in severe fungal infections largely as a result of advances in medical treatment, such as increasingly aggressive chemotherapy procedures, advances in organ and bone marrow transplantation procedures, and an increase in the population of immuno-compromised patients, namely transplant patients, patients with cancer undergoing chemotherapy, and patients with HIV/AIDS. Immuno-compromised patients are at risk from a variety of fungal infections that are normally combated by an individual's healthy immune system. For these patients, such infections represent a major mortality risk.

Since 2004, we have experienced increased competitive market conditions for Abelcet, primarily due to the introduction of newer antifungal agents.

We manufacture Abelcet in the U.S.

### **4) *Adagen***

Adagen is a PEGylated bovine adenosine deaminase enzyme (ADA) used to treat patients afflicted with a type of Severe Combined Immunodeficiency Disease, or SCID, also known as the Bubble Boy Disease, which is caused by the chronic deficiency of ADA. We received U.S. marketing approval from the FDA for Adagen in March 1990. Adagen represents the first successful application of enzyme replacement therapy for an inherited disease. SCID results in children being born without fully functioning immune systems, leaving them susceptible to a wide range of infectious diseases. Currently, the only regulatory approved alternative to Adagen treatment is a well-matched bone marrow transplant. Injections of unmodified ADA are not effective because of its short circulating life (less than 30 minutes) and the potential for immunogenic reactions to a bovine-sourced enzyme. The attachment of PEG to ADA allows ADA to achieve its full therapeutic effect by increasing its circulating life and masking the ADA to avoid immunogenic reactions.

We are required to maintain a permit from the U.S. Department of Agriculture (USDA) in order to import ADA. This permit must be renewed on an annual basis. As of October 16, 2008, the USDA issued a permit to us to import ADA through October 16, 2009.

We sell Adagen on a worldwide basis. We utilize independent distributors in certain territories including the U.S., Europe and Australia.

Like Oncaspar, we are investing in the improvement of the manufacturing processes, pharmaceutical properties, and changing the raw material from a bovine-derived source to a recombinant source for Adagen. A significant investment will occur over the next few years. This investment is necessary for the continued life-saving treatment of Adagen patients.

We manufacture Adagen in the U.S.

### Products Segment Research and Development Expense

Products segment research and development expense was \$14.6 million, \$10.6 million and \$7.3 million for the years ended December 31, 2008, 2007 and 2006, respectively. Products segment research and development expenses related to currently marketed products are directed largely towards securing and maintaining a reliable supply of the ingredients used in the production of Oncaspar and Adagen.

### ROYALTIES SEGMENT

An important source of our revenue is derived from royalties that we receive on sales of marketed products that utilize our proprietary technology. Currently, we are receiving royalties on four marketed products that are successfully utilizing our proprietary PEGylation platform, namely PEG-INTRON, Pegasys, Macugen, and CIMZIA, with PEG-INTRON being the largest source of our royalty income.

Product	Indication	Company
PEG-INTRON (peginterferon alfa-2b)	chronic hepatitis C	Schering-Plough Corporation
Macugen (pegaptanib sodium injection)	neovascular (wet) age-related macular degeneration	OSI Pharmaceuticals, Inc. and Pfizer Inc.
Pegasys (peginterferon alfa-2a)	hepatitis C	Hoffmann-La Roche
CIMZIA (certolizumab pegol)	Crohn's disease	UCB Pharma

PEG-INTRON is a PEG-enhanced version of Schering-Plough's alpha interferon product, INTRON® A, which is used both as a monotherapy and in combination with REBETOL® (ribavirin) capsules for the treatment of chronic hepatitis C. Under our license agreement with Schering-Plough, Schering-Plough holds an exclusive worldwide license to PEG-INTRON. We continue to receive royalties on Schering-Plough's worldwide sales of PEG-INTRON. Schering-Plough is responsible for all manufacturing, marketing, and development activities for PEG-INTRON. We designed PEG-INTRON to allow for less frequent dosing and to yield greater efficacy, as compared to INTRON A. PEG-INTRON is marketed worldwide by Schering-Plough and its affiliates. In December 2004, Schering-Plough's subsidiary, Schering-Plough K.K., launched PEG-INTRON and REBETOL combination therapy in Japan. At that time, PEG-INTRON and REBETOL was the only PEGylated interferon-based combination therapy available in Japan, where an estimated one to two million persons are chronically infected with hepatitis C. In January 2007, Hoffmann-La Roche announced that it received approval for its competing PEGylated interferon-based combination therapy, COPEGUS (ribavirin) plus Pegasys (peginterferon alfa-2a (40KD)), following fast-track review by the Japanese regulatory agency. In December 2008, Schering-Plough announced that the FDA granted marketing approval to PEG-INTRON and REBETOL combination therapy for use in previously untreated patients 3 years of age or older with chronic hepatitis C. This represents the first and only approved peginterferon in combination with ribavirin for treating pediatric hepatitis C.

In August 2007, we monetized 25% of our future royalties from the sales of PEG-INTRON for \$92.5 million in gross proceeds.

PEG-INTRON is being evaluated in a number of ongoing clinical studies:

- 1) *IDEAL Study* — In April 2008, final results from the IDEAL study were presented at the Annual Meeting of European Association for the Study of the Liver (EASL). This study directly compared PEG-INTRON in combination with REBETOL versus Pegasys in combination with COPEGUS, as well as a lower dose of PEG-INTRON in 3,070 adult patients in the U.S. According to Schering-Plough, the results showed that sustained virologic response (SVR) was similar for all three treatment regimens. The study also showed in secondary analyses that PEG-INTRON combination therapy provided greater predictability of response at important treatment milestones and significantly lower relapse rates after the end of treatment than Pegasys and COPEGUS combination therapy, despite patients in the Pegasys arm overall receiving a significantly higher median ribavirin dose over the duration of the study. Safety and tolerability were similar among the treatment arms.
- 2) *COPILLOT Study* — PEG-INTRON is being evaluated for use as long-term maintenance monotherapy in cirrhotic and portal hypertension patients who have failed previous treatment.

Results from this study were presented at EASL in April 2008. This study showed that low-dose peginterferon alfa-2b was superior to colchicine in improving disease-free survival of patients with cirrhosis and portal hypertension, especially in patients who stayed on treatment.

- 3) *ENDURE Study* — In January 2006, Schering-Plough announced that it was initiating a large multinational clinical trial, to evaluate the use of low-dose PEG-INTRON maintenance monotherapy in preventing or delaying hepatitis disease progression.
- 4) *PROTECT Study* — In May 2006, Schering-Plough announced the initiation of a large multicenter clinical trial in the U.S. to evaluate the safety and efficacy of PEG-INTRON and REBETOL combination therapy in liver transplant recipients with recurrent hepatitis C virus infection. The trial is targeted to enroll 125 patients in the U.S.
- 5) *EPIC3 Study* — In October 2008, Schering-Plough reported data from EPIC3, a large ongoing clinical study, showing that retreatment with PEG-INTRON and REBETOL combination therapy can result in sustained virologic response in patients with chronic hepatitis C who failed previous treatment with any alpha interferon-based combination therapy, including peginterferon regimens. 56 percent of the patients who had undetectable virus after 12 weeks went on to achieve SVR with a 48-week course of therapy. Overall, 23 percent of patients achieved SVR.
- 6) Schering-Plough announced on January 31, 2008, that the FDA accepted the PEG-INTRON sBLA for review and has granted Priority Review status for the adjuvant treatment of patients with Stage III melanoma. PEG-INTRON was also filed with the EMEA in Europe in the fall of 2007.
- 7) Schering-Plough announced on May 21, 2008 the initiation of two large Phase II studies of boceprevir, its investigational oral hepatitis C protease inhibitor, in combination with PEG-INTRON and REBETOL in patients who failed prior treatment. This is an area of great unmet medical need. Schering-Plough said the two pivotal studies will run concurrently and are projected to enroll a total of more than 1,400 patients at U.S. and international sites.
- 8) Finally, PEG-INTRON is being evaluated in several investigator-sponsored trials as a potential treatment for various cancers, including several earlier stage clinical trials for other oncology indications.

We have out-licensed our proprietary PEGylation and single-chain antibody, or SCA, technologies on our own and through agreements with Nektar Therapeutics, Inc. (Nektar) and Micromet AG (Micromet). Under the original 2002 agreement, Nektar had the lead role in granting sublicenses for certain of our PEG patents and we receive royalties on sales of any approved product for which a sublicense has been granted. Effective in January 2007, Nektar's right to grant additional sublicenses is limited to a certain class of our PEGylation technology. Existing sublicenses granted by Nektar prior to January 2007 were unaffected. Currently, the Company is aware of five third-party products for which Nektar has granted sublicenses to our PEGylation technology, including Hoffmann-La Roche's Pegasys (peginterferon alfa-2a), OSI Pharmaceutical's Macugen (pegaptanib sodium injection), UCB's Cimzia (certolizumab pegol, CDP870), Affymax and Takeda Pharmaceutical's Hematide™ and an undisclosed product of Pfizer's. Pegasys is currently being marketed for the treatment of hepatitis C and Macugen is currently being marketed through a collaboration between OSI and Pfizer for the treatment of neovascular (wet) age-related macular degeneration, an eye disease associated with aging that destroys central vision. CIMZIA was approved in April 2008 for the treatment of Crohn's disease and is marketed by UCB. CIMZIA received an approvable letter from the FDA for its Biologics License Application (BLA) in rheumatoid arthritis. Hematide is a synthetic peptide-based erythropoiesis-stimulating agent being evaluated by Affymax and Takeda Pharmaceutical in two phase III clinical trials for the treatment of anemia in chronic kidney failure. While we will continue to receive royalties on sales of these products, Nektar will only have the right to grant any additional sublicenses to a limited class of our PEGylation technology. We have the right to use or grant licenses to all of our PEGylation technology for all purposes, including our own proprietary products or those we may develop with co-commercialization partners or for those developed by third parties.

We receive a royalty from medac GmbH (medac), a private company based in Germany, on sales of Oncaspar KH recorded by medac.

## **CONTRACT MANUFACTURING SEGMENT**

We utilize a portion of our excess manufacturing capacity to provide contract manufacturing services for a number of injectable products. Currently, we manufacture Abelcet for export and MYOCET, both for Cephalon France SAS (Cephalon), the injectable multivitamin MVI® for Hospira, Inc., as well as other products at our facility in Indianapolis. Our contract with Hospira is scheduled to end in April 2010. We entered into two other manufacturing agreements near the end of 2006. In our manufacture of these products, we utilize complex manufacturing processes, such as single- and dual-chamber vial filling and lipid complex formulations.

We continue to focus on our contract manufacturing business as a means of further leveraging our manufacturing expertise and improving our overall profit margins.

## **RESEARCH AND DEVELOPMENT**

Our internal pharmaceutical development programs focus on the development of novel compounds for the treatment of cancer and adjacent therapeutic areas where there are unmet medical needs. We are building a proprietary research and development pipeline both through the application of our proprietary technologies and through strategic agreements that provide access to promising product development opportunities within our therapeutic focus.

Our PEGylation technology, particularly our Customized Linker Technology platform that utilizes our releasable linkers, has applicability for areas beyond oncology. Our research and development activities may yield data that supports developing our proprietary compounds in certain non-oncology applications. Our strategy is to utilize our PEGylation platform for internal discovery and development programs first, and then explore additional opportunities for PEGylation outside of the oncology market through strategic alliances. We offer potential partners substantial know-how in the area of PEGylation and an experienced management team with extensive experience in researching, developing, marketing and selling pharmaceutical products, particularly for the treatment of cancer.

We seek new clinical products from internal and external sources. Our internal research and development activities focus on applying our proprietary technologies, namely our PEGylation expertise, to internal product candidates, and developing products accessed through licensing transactions such as our agreement with Santaris Pharma A/S (Santaris). In July 2006, we entered into a global collaboration with Santaris to co-develop and commercialize a series of innovative ribonucleic acid (RNA) antagonists based on the LNA® (locked nucleic acid) technology. We have licensed the HIF-1 alpha antagonist and the Survivin antagonist, and have selected six additional proprietary RNA antagonist candidates, all to be directed against novel oncology targets.

### ***PEG-SN38***

This product candidate utilizes our customized PEGylation technology together with SN38, which is the active metabolite of the cancer drug irinotecan. Irinotecan is a chemotherapeutic pro-drug marketed as Camptosar (CPT-11) in the U.S. Unmodified SN38 is insoluble and can only be used to treat cancer by administering the pro-drug. A pro-drug is a compound that is converted into the active drug in the body. Only a small percentage of the CPT-11 is converted into SN38 in cancer cells and the unpredictability of conversion and metabolism in each patient may result in a variable efficacy and safety profile. Using our customized PEGylation technology, we designed a PEGylated version of SN38 that offers therapeutic advantages over unmodified SN38 and existing therapies. PEG-SN38 allows for intravenous delivery, increased solubility, higher exposure of the cancer cells to SN38 and longer apparent half-life of SN38.

In pre-clinical studies, PEG-SN38 demonstrated potent in vitro toxicity against a broad spectrum of human cancer cell lines. These studies also demonstrated significant anti-tumor activity in several xenograft models (where human tissue is grafted into an animal), including very aggressive tumors, such as colorectal cancer, breast cancer, pancreatic cancer and non-Hodgkin's lymphoma. In preclinical studies, treatment with a single or multiple small doses of PEG-SN38 led to complete cures of animals in a breast cancer model and aggressive

forms of non-Hodgkin's lymphomas. In colorectal and pancreatic cancer pre-clinical animal models, PEG-SN38 demonstrated significantly better therapeutic efficacy, at their respective maximum tolerated doses and equivalent dose levels, than CPT-11. Importantly, treatment with PEG-SN38 resulted in tumor growth inhibition in tumors resistant to CPT-11 and outperformed CPT-11 when given as second-round therapy to animals initially responding to CPT-11. Finally, pre-clinical studies also showed that PEG-SN38 provided a long circulation half-life and exposure to SN38 in mice.

Pre-clinical studies demonstrate that PEG-SN38 was well tolerated by pretreated animals to which it was administered. In addition, pharmacokinetic data has demonstrated that administration of PEG-SN38 has resulted in a sustained high concentration of SN38 consistent with the results of the pre-clinical studies.

The FDA accepted the IND for PEG-SN38 in 2007. We are currently conducting two Phase I clinical trials with PEG-SN38 in patients with solid tumors and lymphomas who have had been extensively treated with and progressed on other chemotherapeutic agents to evaluate different dosing schedules for PEG-SN38.

In the first study, PEG-SN38 is administered to patients once every three weeks. These patients have been treated with an average of four prior chemotherapeutic regimens before entering this trial. Stable disease has been observed in a number of patients. We have determined the dose limiting toxicity in patients receiving PEG-SN38 as a single agent in this study. We are proceeding with dose escalation in patients with PEG-SN38 in combination with granulocyte colony-stimulating factor, a compound that stimulates the production of a certain type of white blood cell.

In the second study, PEG-SN38 is administered on a four-week cycle with patients receiving PEG-SN38 weekly for three weeks with the fourth week off. We are proceeding with dose escalation on this four week schedule and have not yet observed dose limiting toxicity. We have observed stable disease in several patients in this study.

### ***LOCKED NUCLEIC ACID (LNA) TECHNOLOGY-BASED PROGRAMS***

HIF-1 alpha antagonist. We are developing a HIF-1 alpha antagonist based on the LNA technology for the treatment of cancer. HIF-1 alpha is a highly visible, well-validated target in many cancer types, including common solid tumors. HIF-1 alpha is a key regulator of a large number of genes important in cancer biology, such as blood vessel development (angiogenesis), cell proliferation, programmed cell death (apoptosis), glucose metabolism and cell invasion. HIF-1 alpha protein level is low in normal cells, but reaches high intracellular concentrations in a variety of cancers and is strongly correlated with poor prognosis and resistance to therapy. Drugs targeting HIF-1 alpha thus have the potential to target multiple processes critical for a broad spectrum of cancers.

Pre-clinical study data demonstrated that in vitro, in human prostate and glioblastoma cells, the HIF-1 alpha antagonist induced a potent, selective and durable inhibition of HIF-1 alpha expression, both under in conditions of normal and low oxygenation. Down-regulation of HIF-1 alpha (both RNA and protein) by the HIF-1 alpha antagonist led to reduction of its transcriptional targets and significant reduction in tube formation in human umbilical vein endothelial cells which indicates a reduction in angiogenesis. In vivo, administration of the HIF-1 alpha antagonist to normal mice led to specific, dose-dependent, and highly potent down-regulation of HIF-1 alpha and vascular endothelial growth factor (VEGF) in the liver. Pre-clinical efficacy studies in a mouse cancer model showed tumor reduction upon treatment with HIF-1 alpha antagonist.

The FDA accepted the IND for the HIF-1 alpha antagonist in 2007. We are currently conducting two Phase I studies in patients with solid tumors and lymphoma to evaluate the safety of the HIF-1 alpha antagonist using two different dosing schedules. We continue to enroll patients on a weekly and a daily schedule. In general, HIF-1 alpha antagonist therapy has been well tolerated, and many patients have received multiple cycles with both the weekly and the daily administration regimen. We have observed stable disease in a number of patients treated with our HIF-1 alpha antagonist.

Survivin Antagonist. Survivin plays a vital regulatory role in both apoptosis and cell division. Survivin is heavily over-expressed in many cancers and in newly formed endothelial cells engaged in angiogenesis but almost absent in normal adult differentiated tissue. Resistance of cancer cells to radiotherapy and cytotoxic drugs is strongly correlated with expression of Survivin. Clinically, Survivin expression is associated with poor

prognosis, increased cancer recurrence and resistance to therapy. The IND for our Survivin antagonist was recently accepted by the FDA and we opened our Phase 1 study in February 2009.

Additional RNA Antagonists. Under our agreement with Santaris we will have the right to develop and commercialize RNA antagonists directed against six additional novel oncology gene targets selected by us. To date, we have received compounds directed at four of our licensed targets. We are evaluating these compounds in early preclinical studies.

#### ***RECOMBINANT HUMAN MANNOSE-BINDING LECTIN***

We licensed from NatImmune the exclusive worldwide rights, excluding the Nordic countries, to rhMBL, a protein therapeutic being developed for the prevention and treatment of severe infections in individuals with low levels of MBL. MBL binds to a wide range of infectious organisms including bacteria, fungi, viruses, and parasites and activates the lectin pathway of the complement system, an important part of the immune system.

Given the broad therapeutic potential of rhMBL, we evaluated rhMBL in various settings of immune suppression. We conducted two Phase I/II clinical trials, one in patients with multiple myeloma who are undergoing high dose chemotherapy followed by peripheral stem cell transplantation and another in patients who have undergone liver transplant surgery. Clinical study data from the multiple myeloma trial presented indicated that, based on the 18 patients that were evaluated, rhMBL has been well tolerated in the multiple myeloma patient population. In addition, complement activity was returned to normal levels in patients with weekly administration of rhMBL. In February 2009, we announced that our current data did not meet the criteria we established at the start of this program and clinical development was discontinued. However, rhMBL continues to be a very novel compound and could still have potential in patients with low levels of MBL.

#### ***PEGylation TECHNOLOGY***

Since our inception in 1981, our core expertise has been in engineering improved versions of injectable therapeutics through the chemical attachment of polyethylene glycol or PEG. In some cases, PEGylation can render a compound therapeutically effective, where the unmodified form had only limited clinical utility. Currently, there are five marketed biologic products that utilize our proprietary PEG platform, two of which we market, Adagen and Oncaspar, and four for which we receive royalties, PEG-INTRON, Pegasys, Macugen and CIMZIA.

The inability to effectively deliver therapeutic molecules remains a significant limitation of modern medicine. About 40% of drugs in development and approximately 60% of drugs made by direct synthesis are poorly soluble which creates delivery challenges. PEGylation has successfully been used to improve the pharmaceutical properties of various compounds currently in use as approved therapeutics. PEGylation is a complex process and the method of adding the PEG molecule, as well as of the method of attachment to the pharmaceutical compound, may affect the efficacy, safety and side effect profile of the final product. As a result, expertise in the PEGylation process is crucial to the development of an effective medication.

Specific advantages of attachment of PEG to a pharmaceutical compound may include:

- increased efficacy;
- reduced dosing frequency;
- reduced toxicity and immunogenicity;
- increased drug stability; and
- enhanced drug solubility.

In addition, our proprietary PEG platform is further characterized by:

- tolerability;
- established clinical and commercial benefits;
- broad applicability to a variety of macromolecules or biologic therapeutics, including proteins, peptides, enzymes, and short nucleic acid chains (oligonucleotides), as well as small molecules; and

- proven commercial scale-up capability.

These characteristics have been exemplified in six FDA-approved PEGylated pharmaceutical products utilizing our proprietary PEG technology.

We have developed Customized Linker Technology that allows the customized attachment of PEG to a pharmaceutical compound, using a spectrum of customized stable and releasable linkers. Customized Linker Technology has the potential to overcome the pharmacologic limitations for a broad set of therapeutics, such as small molecules, proteins, peptides, antibodies, enzymes, and oligonucleotides and generate compounds with substantially enhanced therapeutic value over their unmodified forms. Our Customized Linker Technology offers a choice of releasable or permanent linkages to match each drug's requirements and allows the pharmaceutical compound to be released at a controlled rate.

Customized Linker Technology may play an important role in enhancing the long-standing benefits of PEG to include additional classes of compounds where traditional permanent linkers are not suitable. We are also combining our PEGylation platform with complementary drug delivery technologies. The novel attributes of customized PEG linkers may provide superior pharmaceutical properties, including increased activity and substantially reduced side effects, when compared to traditional stable linkers.

### **LNA TECHNOLOGY**

The LNA technology is based on the Locked Nucleic Acid, a proprietary synthetic analog of RNA which is fixed in the shape adopted by RNA in a helical conformation. When incorporated into an oligonucleotide, the presence of LNA may result in several potential therapeutic advantages. Because LNA resembles RNA, LNA- containing drugs have very high binding affinity for their target RNA and are more stable than traditional oligonucleotides. LNA-containing oligonucleotides use the "antisense" principle to block the function of specific messenger RNAs within cells and tissues, and act as RNA antagonists. LNA-containing RNA antagonists have enhanced potency, specificity and stability and therefore may provide improved efficacy based on their alternative chemistry. In preclinical studies, LNA-containing RNA antagonists have been demonstrated to be 100 to 1,000 times more potent than conventional antisense compounds, with similar potency to small interfering RNAs. In particular, due to effective RNA degradation they switch off the synthesis of harmful target proteins, thereby potentially altering disease outcomes in cancer or other serious disorders.

We have a license and collaboration agreement with Santaris for eight RNA antagonists. We hold the worldwide rights, other than in Europe, to develop and commercialize RNA antagonists based on the LNA technology directed against the HIF-1 alpha and Survivin gene targets, and against six additional gene targets directed against novel oncology targets, selected by us.

### *Corporate Research and Development Expense*

Corporate research and development expense was \$43.5 million, \$44.0 million and \$35.6 million for the years ended December 31, 2008, 2007 and 2006, respectively. Research and development expenses related to currently marketed products are excluded from these corporate amounts and are reported as part of the Products segment.

### **SALES AND MARKETING**

We have a sales and marketing team that includes a sales force that markets the Enzon products in the U.S. We use medac as our distributor of Oncaspar in Europe. Our marketing strategies do not incorporate the use of any significant direct-to-consumer advertising.

Abelcet is utilized in the U.S. and Canada by hospitals, clinics and alternate care sites that treat patients with invasive fungal infections, and is sold primarily to drug wholesalers who, in turn, sell the product to hospitals and certain other third parties. We maintain contracts with a majority of our customers which allows those customers to purchase product directly from wholesalers and receive the contracted price generally based on annual purchase volumes.

We market Oncaspar and DepoCyt in the U.S. to hospital oncology centers, oncology clinics, and oncology physicians. We sell Adagen on a worldwide basis. We utilize independent distributors or specialty pharmacies in certain territories, including the U.S. and Europe.

## **MANUFACTURING AND RAW MATERIALS**

In the manufacture of Abelcet, we combine amphotericin B with two phospholipids to produce an injectable lipid complex formulation of amphotericin B. We currently have a long-term supply agreement for amphotericin B with Axellia. Additionally, we are seeking to qualify at least one additional source of supply of amphotericin B.

In the manufacture of Adagen and Oncaspar, we combine activated forms of PEG with unmodified proteins (ADA for Adagen and L-asparaginase for Oncaspar). We have supply agreements with Ovation Pharmaceuticals, Inc. and Kyowa Hakkō to produce the unmodified forms of L-asparaginase. Our agreement with Ovation Pharmaceuticals, Inc. provides for Ovation to supply L-asparaginase to us through 2009. We have committed to effectuate a technology transfer of the cell line and manufacturing of the L-asparaginase to our own supplier by December 31, 2009, and then supply L-asparaginase back to Ovation during the years 2010-2012.

We purchase the unmodified adenosine deaminase enzyme (ADA) used in the manufacturing of Adagen from Roche Diagnostics. Roche Diagnostics, which is based in Germany, is the only FDA-approved supplier of ADA. Our ADA supply agreement with Roche Diagnostics terminated in 2004, although we are still receiving our supply of ADA from them. We are currently developing ADA using a recombinant source as an alternative to the naturally-derived bovine product. Roche Diagnostics continues to supply us with our requirements of ADA and indicated when they terminated the supply agreement that they will continue to do so for a reasonable period of time as we work to develop another source of ADA.

We do not have a long-term supply agreement for the raw polyethylene glycol material that we use in the manufacturing of our PEG products. We believe we maintain a level of inventory that should provide us sufficient time to find an alternate supplier, in the event it becomes necessary, without materially disrupting our business.

Adagen and Oncaspar use our early PEG technology, which is not as advanced as the PEG technology used in PEG-INTRON or our products under development. Due, in part, to certain limitations of our earlier PEG technology, we have had certain manufacturing challenges with Adagen and Oncaspar. Manufacturing and stability problems have required us to implement voluntary recalls or market withdrawals for certain batches of Oncaspar periodically between 2002 and 2006. The updated products discussed above are being developed with newer PEG linker technology and improved manufacturing processes to address these problems.

In 2008, several regulatory agencies, including the U.S. FDA, European MHRA, Brazilian ANVISA, and the BSG, the German Regional Authority, conducted cGMP inspections of our Indianapolis manufacturing facility. Certain of those agencies issued Form 483 or observation reports citing deviations from Current Good Manufacturing Practices (cGMP). Enzon issued official responses to these observations and their receipt was acknowledged. Enzon's manufacturing facility is considered in good cGMP standing.

In February 2007, we announced plans to consolidate our manufacturing operations from South Plainfield, New Jersey to our facility in Indianapolis. This action was taken as part of our continued efforts to streamline operations and improve operational efficiencies. We anticipate continued improvement in costs associated with the manufacturing of our marketed products. This consolidation was completed in 2008.

## **DEVELOPMENT AND COMMERCIALIZATION AGREEMENTS**

### ***SANTARIS PHARMA A/S LICENSE AGREEMENT***

We are party to a license agreement with Santaris for up to eight RNA antagonists. We hold rights worldwide, other than Europe, to develop and commercialize RNA antagonists directed against the HIF-1 alpha and Survivin gene targets, as well as RNA antagonists directed against six additional gene targets selected by us. During 2006, the Company made payments to Santaris totaling \$11 million to acquire the rights to the HIF-

1 alpha and Survivin antagonists and for the identification of six additional gene targets. The \$11 million was reported as acquired in-process research and development. As of December 31, 2008, we have paid an additional \$13 million in milestone payments to Santaris and we could pay an additional \$243 million in milestone payments, upon the successful completion of certain compound synthesis and selection, clinical development and regulatory milestones. Santaris is also eligible to receive royalties from any future product sales of products based on the licensed antagonists. Santaris is entitled to receive a single digit royalty. Santaris retains the full right to develop and commercialize products developed under the agreement in Europe. The agreement terminates upon the earlier of the expiration of the last royalty term for an LNA compound or material breach by either party. The royalty term expires on a country-by-country and product-by-product basis when the last valid LNA platform patent or LNA compound patent expires not to exceed 21 years with respect to any product. Santaris can terminate the agreement with respect to a specific LNA compound provided by Santaris if we do not achieve certain development milestones for that product.

#### ***SCHERING-PLOUGH AGREEMENT***

Our PEG technology was used to develop an improved version of Schering-Plough's product, INTRON A. Schering-Plough is responsible for marketing and manufacturing the product, PEG-INTRON, worldwide on an exclusive basis and we receive royalties on worldwide sales of PEG-INTRON for all indications. Schering-Plough's obligation to pay us royalties on sales of PEG-INTRON terminates, on a country-by-country basis, upon the later of the date the last patent to contain a claim covering PEG-INTRON expires in the country or 15 years after the first commercial sale of PEG-INTRON in such country. Currently, expirations are expected to occur in 2016 in the U.S., 2018 in Europe and 2019 in Japan. The royalty percentage to which we are entitled will be lower in any country where a PEGylated alpha-interferon product is being marketed by a third party in competition with PEG-INTRON where such third party is not Hoffmann-La Roche.

We do not supply Schering-Plough with PEG-INTRON or any other materials and our agreement with Schering-Plough does not obligate Schering-Plough to purchase or sell specified quantities of any product.

During the quarter ended September 30, 2007, we sold a 25% interest in future royalties payable to us by Schering-Plough on sales of PEG-INTRON occurring after June 30, 2007.

#### ***SANOFI-AVENTIS LICENSE AGREEMENTS***

During 2002, we amended our license agreement with Sanofi-Aventis to reacquire the rights to market and distribute Oncaspar in the U.S., Mexico, Canada and most of the Asia/Pacific region. In return for the marketing and distribution rights, we paid Sanofi-Aventis \$15.0 million and were also obligated to pay a 25% royalty on net sales of Oncaspar in the U.S. and Canada through 2014. Following the expiration of the royalty obligations in 2014, all rights to Oncaspar will revert back to us, unless the agreement is terminated earlier because we fail to make royalty payments or cease to sell Oncaspar.

The amended license agreement prohibits Sanofi-Aventis from making, using or selling an asparaginase product in the U.S. or a competing PEG-asparaginase product anywhere in the world until the later of the expiration of the agreement or, if the agreement is terminated earlier, five years after termination. If we cease to distribute Oncaspar or if we fail to make the required royalty payments, Sanofi-Aventis has the option to distribute the product in the territories.

Effective in January 2006, we further amended our license agreement with Sanofi-Aventis for Oncaspar. In exchange for an upfront cash payment of \$35.0 million, we obtained a significant reduction in our royalty rate. Also, pursuant to the terms of the agreement, we became liable to Sanofi-Aventis during 2008 for a \$5.0 million milestone payment (paid in January 2009) as a result of Oncaspar net sales in the U.S. and Canada exceeding \$35.0 million for two consecutive calendar years. We are obligated to make royalty payments, through June 30, 2014, at which time all of our royalty obligations will cease.

#### ***MEDAC LICENSE AGREEMENT***

In January 2002, we renewed an exclusive license to medac, to sell Oncaspar and any PEG-asparaginase product developed by us or medac during the term of the agreement in most of Europe and parts of Asia. Our

supply agreement with medac provides for medac to purchase Oncaspar from us at certain established prices and meet certain minimum purchase requirements. Medac is responsible for obtaining additional approvals and indications in the licensed territories beyond the currently approved indication in Germany. The agreement was for five years and automatically renewed as of January 1, 2007 for an additional five years through December 31, 2011. Thereafter, the agreement will automatically renew for an additional two years unless either party provides written notice of its intent to terminate the agreement at least 12 months prior to the scheduled expiration date. Following the expiration or termination of the agreement, all rights granted to medac will revert back to us.

#### ***MICROMET ALLIANCE***

Under our cross-license agreement and marketing agreement with Micromet, Micromet is the exclusive marketer of the two companies' combined intellectual property estate in the field of SCA technology. Any resulting revenues from the license agreements executed by Micromet will be shared equally by the two companies. In 2008, we recognized royalty revenue of \$461 thousand related to our share of revenues from Micromet's licensing activities associated with this agreement.

#### ***NATIMMUNE A/S LICENSE AGREEMENT***

We are party to a license agreement with NatImmune for their lead development compound, rhMBL, a protein therapeutic under development for the prevention of severe infections in MBL deficient individuals undergoing chemotherapy. Under the agreement, we hold exclusive worldwide rights, excluding the Nordic countries, and are responsible for the development, manufacture and marketing of rhMBL. As of December 31, 2008, we have paid an aggregate of \$12.7 million in upfront and milestone payments to NatImmune. Should Enzon cease further development of the rhMBL compounds, NatImmune may terminate the license agreement.

#### ***NEKTAR AGREEMENT***

In January 2002, we entered into a PEGylation technology licensing agreement with Nektar under which we granted Nektar the right to grant sub-licenses for a portion of our PEGylation technology to third parties. However, on September 7, 2006, we gave notice to Nektar of our intention not to renew the provisions of our agreement with them that gave Nektar the right to sub-license a portion of our PEGylation technology and patents to third-parties. This right terminated in January 2007 and will not affect any existing sub-licenses granted by Nektar. Nektar will only continue to have the right to sub-license a limited class of our PEGylation technology and we will receive a royalty or a share of Nektar's profits for any products that utilize our patented PEGylation technology under a license granted by Nektar. We retain all rights to use or grant licenses to all of our PEGylation technology for our own proprietary products or those we may develop with co-commercialization partners.

#### ***PACIRA AGREEMENT***

In December 2002, we entered into a strategic alliance with Pacira, under which we licensed the U.S. and Canadian rights to DepoCyt, an injectable chemotherapeutic approved for the treatment of patients with lymphomatous meningitis. Under the terms of the agreement, we paid Pacira a license fee of \$12.0 million. Pacira manufactures DepoCyt and we purchase product at a price equal to 35% of our net sales, which percentage can be reduced should a defined sales target be exceeded. We recorded the \$12.0 million license fee as an intangible asset that is being amortized over a ten-year period.

Under this agreement, we are required to maintain sales levels of DepoCyt equal to \$5.0 million for each calendar year (Minimum Sales) through the remaining term of the agreement. Pacira is also entitled to a milestone payment of \$5.0 million if our sales of the product exceed a \$17.5 million annual run rate for four consecutive quarters and an additional milestone payment of \$5.0 million if our sales exceed an annualized run rate of \$25.0 million for four consecutive quarters. For the year ended December 31, 2008, net sales of DepoCyt were approximately \$9.0 million. We are also responsible for a milestone payment of \$5.0 million if the product receives approval for an indication for use in all neoplastic meningitis.

Our license is for an initial term of ten years, to December 2012, and is automatically renewable for successive two-year terms thereafter. Pacira will be entitled to terminate the agreement if we fail to satisfy our Minimum Sales for two consecutive years.

### ***CEPHALON MANUFACTURING AGREEMENTS***

Cephalon France SAS (Cephalon) owns the right to market Abelcet in any markets outside of the U.S., Canada and Japan. Our manufacturing agreements with Cephalon require that we supply Cephalon with Abelcet and MYOCET through November 22, 2011 and January 1, 2010, respectively. The selling price is fixed, subject to an annual Producer Price Index adjustment.

### **PATENTS AND INTELLECTUAL PROPERTY RIGHTS**

Patents are very important to us in establishing the proprietary rights to the products we have developed or licensed. Our executive management team has reinforced our organizational commitment to intellectual property. The patent position of pharmaceutical or biotechnology companies can be uncertain and involve complex legal, scientific and factual questions. If our intellectual property positions are challenged, invalidated or circumvented, or if we fail to prevail in potential future intellectual property litigation, our business could be adversely affected. We have an extensive portfolio of issued U.S. patents and filed applications, many of which have foreign counterparts. These patents, if extensions are not granted, are expected to expire beginning in 2009 through 2028. Under our license agreements, we have exclusively licensed patents related to our commercial and development products. Of the patents owned or exclusively licensed by us, seven relate to PEG-INTRON, 17 relate to Abelcet, and three relate to DepoCyt. Our products, Oncaspar and Adagen, are not covered by any patents. We have exclusively licensed patents from NatImmune related to rhMBL and from Santaris Pharma related to our HIF-1 alpha antagonist and our other LNA compounds in development. Although we believe that our patents provide certain protection from competition, we cannot assure you that such patents will be of substantial protection or commercial benefit to us, will afford us adequate protection from competing products, or will not be challenged or declared invalid. In addition, we cannot assure you that additional U.S. patents or foreign patent equivalents will be issued to us.

Patents for individual products extend for varying periods according to the date of patent filing or grant and the legal term of patents in the various countries where patent protection is obtained. The actual protection afforded by a patent, which can vary from country to country, depends upon the type of patent, the scope of its coverage and the availability of legal remedies in the country.

The patent covering our original PEG technology, which we had licensed from Research Corporation Technologies, Inc., contained broad claims covering the attachment of PEG to polypeptides. However, this U.S. patent and its corresponding foreign patents have expired. Based upon the expiration of the Research Corporation patent, other parties may make, use, or sell products covered by the claims of the Research Corporation patent, subject to other patents, including those that we hold. We have obtained and intend to continue to pursue patents with claims covering improved methods of attaching or linking PEG to therapeutic compounds. We also have obtained patents relating to the specific composition of the PEG-modified compounds that we have identified or created. We will continue to seek such patents as we develop additional PEG-enhanced products. We cannot assure you that we will be able to prevent infringement by unauthorized third parties or that competitors will not develop competitive products outside the protection that may be afforded by our patents.

We are aware that others have also filed patent applications and have been granted patents in the U.S. and other countries with respect to the application of PEG to proteins and other compounds. Owners of any such patents may seek to prevent us or our collaborators from making, using or selling our products.

In the field of SCA proteins, we have several U.S. and foreign patents and pending patent applications, including a patent granted in August 1990 covering the genes needed to encode SCA proteins.

Through our acquisition of Abelcet, we acquired several U.S., Canadian, and Japanese patents claiming the use and manufacture of Abelcet.

We have obtained licenses from various parties that we deem to be necessary or desirable for the manufacture, use, or sale of our products. These licenses generally require us to pay royalties to the parties on product sales. In addition, other companies have filed patent applications or have been granted patents in areas of interest to us. There can be no assurance that any licenses required under such patents will be available to us on acceptable terms or at all.

We sell our products under trademarks that we consider in the aggregate to be of material importance. Trademark protection continues in some countries for as long as the mark is used and, in other countries, for as long as it is registered. Registrations generally are for fixed, but renewable, terms.

## GOVERNMENT REGULATION

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements on the clinical development, manufacture, and marketing of pharmaceutical products. These agencies and other federal, state and local entities regulate research and development activities and the inspection, testing, manufacture, quality assurance, safety, effectiveness, labeling, packaging, storage, distribution, record-keeping, approval, and promotion of our products. All of our products will require regulatory approval before commercialization. In particular, therapeutic products for human use are subject to rigorous preclinical and clinical testing and other requirements of the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act, implemented by the FDA, as well as similar statutory and regulatory requirements of foreign countries. Obtaining these marketing approvals and subsequently complying with ongoing statutory and regulatory requirements is costly and time consuming. Any failure by us or our collaborators, licensors or licensees to obtain, or any delay in obtaining, regulatory approval or in complying with post-approval requirements, could adversely affect the marketing and sale of products that we are developing and our ability to receive product or royalty revenues.

The steps required before a new drug or biological product may be distributed commercially in the U.S. generally include:

- conducting appropriate preclinical laboratory evaluations of the product's chemistry, formulation and stability, and animal studies to assess the potential safety and efficacy of the product,
- submitting the results of these evaluations and tests to the FDA, along with manufacturing information, analytical data and clinical investigational plan, in an IND,
- obtaining IND approval from the FDA, which may require the resolution of any safety or regulatory concerns of the FDA,
- obtaining approval of Institutional Review Boards or IRBs, prior to introducing the drug or biological product into humans in clinical trials and registering clinical trials in public databases such as [clinicaltrials.gov](http://clinicaltrials.gov),
- conducting adequate and well-controlled human clinical trials that establish the safety and efficacy of the drug or safety, purity and potency of the biological product candidate for the intended use, in the following three typically sequential, stages:

*Phase I.* The product candidate is initially introduced into healthy human subjects or patients and tested for safety, increased dose tolerance, and possibly absorption, distribution, metabolism and excretion,

*Phase II.* The product candidate is studied in patients with the targeted condition to gain safety experience at the proposed dosing schedules, identify possible adverse effects and safety risks to determine the optimal dosage, and to obtain initial information on effectiveness of the product candidate,

*Phase III.* The product candidate is studied in an expanded patient population at multiple clinical trial sites to determine primary efficacy and safety endpoints identified at the start of the clinical trial,

- submitting the results of preliminary research, preclinical studies, and clinical studies as well as chemistry, manufacturing and control information on the drug or biological product to the FDA in a New Drug Application or NDA, for a drug product, or a BLA for a biological product, and

- obtaining FDA approval of the NDA or BLA prior to any commercial sale or shipment of the drug or biological product.

An NDA or BLA must contain, among other things, data derived from non-clinical laboratory studies and clinical trials which demonstrate that the product is safe and effective and for a biological product that it meets prescribed standards of safety, purity and potency, and a full description of manufacturing methods. Biological or drug products may not be marketed in the U.S. until approval by the FDA of an NDA or BLA is received.

The approval process can take a number of years, if approval is obtained at all, and often requires substantial financial resources, including license application fees. The results of preclinical studies and initial clinical trials are not necessarily predictive of the results from large-scale clinical trials, and clinical trials may be subject to additional costs, delays or modifications due to a number of factors, including the difficulty in obtaining enough patients, clinical investigators, drug supply, or financial support. The FDA also may require testing and surveillance programs to monitor the effect of approved products that have been commercialized, and the agency has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs. The FDA can impose substantial fines if these requirements are not carried out to the agency's full satisfaction. Upon approval, a drug product or biological product may be marketed only in those dosage forms and for those indications approved in the NDA or BLA, although information about off-label indications may be disseminated in narrowly defined situations.

In addition to obtaining FDA approval for each indication for which the manufacturer may market the drug, each domestic drug product manufacturing establishment must register with the FDA, list its drug products with the FDA, comply with and maintain cGMP and permit and pass inspections by the FDA and other regulatory authorities. Moreover, the submission of applications for approval may require the preparation of large-scale production batches that can not be used commercially and additional time to complete manufacturing stability studies. Foreign establishments manufacturing drug products for distribution in the U.S. also must register and list their products with the FDA and comply with cGMP. They also are subject to periodic inspection by the FDA or by local authorities under agreement with the FDA.

Any products manufactured or distributed by us pursuant to FDA approvals are subject to extensive continuing regulation by the FDA, including record-keeping requirements and a requirement to report adverse experiences with the product. In addition to continued compliance with standard regulatory requirements, the FDA also may require post-marketing testing and surveillance to monitor the safety and efficacy of the marketed product. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems concerning safety or efficacy of the product are discovered following approval.

The Federal Food, Drug, and Cosmetic Act also mandates that drug products be manufactured consistent with cGMP. In complying with the FDA's regulations on cGMP, manufacturers must continue to spend time, money and effort in production, record-keeping, quality control, quality assurance, and auditing to ensure that the marketed product meets applicable specifications and other requirements. The FDA periodically inspects drug product manufacturing facilities to ensure compliance with cGMP. Failure to comply with cGMP or other FDA requirements subjects the manufacturer to possible FDA action, such as:

- untitled and warning letters,
- suspension of manufacturing,
- seizure of the product,
- voluntary recall of a product,
- injunctive actions,
- civil or criminal penalties.

To the extent we rely on third parties to manufacture our compounds and products, those third parties will be required to comply with cGMP as required by regulations. We have undertaken a voluntary recall of certain lots of products in the past, and future recalls and costs associated with deviations from cGMP are possible.

Even after FDA approval has been obtained, and often as a condition to expedited approval, further studies, including post-marketing studies, are typically required by the FDA. Results of post-marketing studies may limit or expand the further marketing of the products. If we propose any modifications to the product,

including changes in indication, manufacturing or testing processes, manufacturing facility or labeling, an NDA or BLA supplement may be required to be submitted to and approved by the FDA.

Products manufactured in the U.S. for distribution abroad will be subject to FDA regulations regarding export, as well as to the requirements of the country to which they are shipped. These latter requirements apply to products studied in clinical trials, the submission of marketing applications, and all aspects of product manufacture and marketing. Such requirements vary significantly from country to country. As part of our strategic relationships our collaborators may be responsible for the foreign regulatory approval process of our products, although we may be legally liable for noncompliance.

We cannot predict the extent of government regulation that might result from future legislation or administrative action. Moreover, we anticipate that the new presidential administration, Congress, state legislatures and the private sector will continue to review and assess controls on health care spending. Any such proposed or actual changes could cause us or our collaborators to limit or eliminate spending on development projects and may otherwise impact us. We cannot predict the likelihood, nature or extent of adverse governmental regulation that might result from future legislative or administrative action, either in the U.S. or abroad. Additionally, in both domestic and foreign markets, sales of our proposed products will depend, in part, upon the availability of reimbursement from third-party payors, such as government health administration authorities, managed care providers, private health insurers and other organizations. Significant uncertainty often exists as to the reimbursement status of newly approved health care products. In addition, third-party payors are increasingly challenging the price and cost-effectiveness of medical products and services. There can be no assurance that our proposed products will be considered cost-effective or that adequate third-party reimbursement will be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product research and development.

We are also subject to federal and state laws regulating our relationships with physicians, hospitals, third party payors of health care, and other customers. The federal anti-kickback statute, for example, prohibits the willful and knowing payment of any amount to another party with the intent to induce the other party to make referrals for health care services or items payable under any federal health care program. The Federal False Claims Act prohibits facilitating the submission of false claims for payment to the federal government and has been used to enforce against off-label promotion. In recent years the federal government has substantially increased enforcement and scrutiny of pharmaceutical manufacturers with regard to the anti-kickback statute and other federal fraud and abuse rules. State laws also impose a growing compliance burden and enforcement risk in their requirements for licensing, compliance programs and reporting of physician-directed marketing activities.

PEG-INTRON was approved in the European Union, the U.S., and Japan for the treatment of hepatitis C in May 2000, January 2001 and December 2004, respectively. Abelcet was approved in the U.S. in November 1995 and in Canada in September 1997. Oncaspar was approved for marketing in the U.S. in February 1994 in Germany in November 1994, and in Canada in December 1997 for patients with acute lymphoblastic leukemia who are hypersensitive to native forms of L-asparaginase, and in Russia in April 1993 for therapeutic use in a broad range of cancers. Oncaspar was approved in the U.S. for first-line treatment for patients with ALL in July 2006. Adagen was approved in the U.S. in March 1990. DepoCyt received full U.S. approval in April 2007. Except for these approvals, none of our commercial products have been approved for sale and use in humans in the U.S. or elsewhere.

With respect to patented products, delays imposed by the government approval process may materially reduce the period during which we will have the exclusive right to exploit them.

Our operations are also subject to federal, state and local environmental laws and regulations concerning, among other things, the generation, handling, storage, transportation, treatment and disposal of hazardous, toxic and radioactive substances and the discharge of pollutants into the air and water. Environmental permits and controls are required for some of our operations and these permits are subject to modification, renewal and revocation by the issuing authorities. We believe that our facilities are in compliance with our permits and environmental laws and regulations and do not believe that future compliance with current environmental laws will have a material adverse effect on our business, financial condition or results of operations. If, however, we

were to become liable for an accident, or if we were to suffer an extended facility shutdown as a result of such contamination, we could incur significant costs, damages and penalties that could harm our business.

## COMPETITION

### General

Competition in the biopharmaceutical industry is intense and based to a significant degree on scientific and technological factors. These factors include but are not limited to the availability of patent and other protection of technology and products, the ability to commercialize products and technological developments, the ability to obtain governmental approval for testing, manufacturing and marketing of products, and the ability to enter into licensing and similar arrangements to facilitate the development of products and meet other business objectives. We and our marketing partners compete with specialized biopharmaceutical firms and large pharmaceutical companies in North America, Europe and elsewhere, with respect to the licensing of and research and development of product candidates, as well as the commercialization of approved products. These companies, as well as academic institutions, governmental agencies and private research organizations, also compete with us in recruiting and retaining highly qualified scientific personnel and consultants. Many of the companies we compete with are larger than we are and have substantially greater resources. Certain of these companies, especially Merck and Pfizer, are able to compete effectively with us largely by virtue of their superior resources and the market's familiarity with their "brand names" regardless of the technical advantages or disadvantages of their products.

### Products

#### *Abelcet*

The intravenous or IV antifungal market in which Abelcet competes has been facing increasingly competitive market conditions. The products used to treat fungal infections are classified into four classes of drugs: Conventional Amphotericin B or (CAB), lipid-based CAB formulations, triazoles, and echinocandins. While we compete with all of these drugs, Abelcet is predominately used in more severely ill patients.

CAB is a broad-spectrum polyene antifungal agent that is believed to act by penetrating the cell wall of a fungus, thereby killing it. CAB is particularly toxic to the kidneys, an adverse effect that often restricts the amount that can be administered to a patient. CAB is sold today as a significantly lower cost generic drug. Its usage has been declining, however, due to these toxicities.

The lipid-based formulations of CAB include Abelcet, amphotericin B liposome for injection, which is marketed by Astellas Pharma US, Inc. (Astellas) and Gilead Sciences (Gilead) in the U.S., and amphotericin B cholesteryl sulfate complex for injection, which is marketed by Three Rivers Pharmaceuticals, LLC. These formulations provide the efficacy of CAB while limiting the toxicities that are inherent in its usage. Astellas' and Gilead's amphotericin B liposome for injection has proven to be a significant competitor to Abelcet. Astellas and Gilead have reduced the price of this lipid-based product in certain geographic markets, which has increased the competitive pressure on Abelcet. In addition, in May 2005, Astellas launched a new systemic antifungal agent, micafungin sodium for injection, which is a member of the echinocandin class of antifungal agents, discussed below. To the extent we are not able to address this competitive pressure successfully or we deem it necessary to reduce the price of Abelcet in order to address this competitive threat, our market share, revenues or both could decrease, which could have a material adverse effect on our business, financial condition and results of operations.

The triazoles, which include fluconazole (marketed generically and under the brand name Diflucan® by Pfizer), itraconazole (marketed under the brand name Sporanox® by Janssen Pharmaceuticals) and voriconazole (also marketed by Pfizer under the brand name Vfend®) have the least reported incidence of side effects as compared to other classes of antifungals. Triazoles are generally thought to be limited by a narrower spectrum of activity and have issues with drug-to-drug interactions and acquired resistance. The majority of triazole units sold in the U.S. are attributed to fluconazole. Fluconazole in particular is often used in "less compromised" patients as prophylaxis or first-line empirical therapy. Fluconazole patients are often switched to an amphotericin B product once a clinician is convinced that a patient has a fungal infection. Voriconazole is a

second-generation triazole approved in May 2002 and is available in intravenous and oral formulations. Voriconazole carries a broader spectrum of activity than first generation triazoles; however, it carries with it a narrower spectrum of activity versus CAB and the lipid amphotericin B formulations, while also retaining the same potential for drug-to-drug interactions and acquired resistance as the first generation triazoles. Another triazole product, posiconazole, was approved by the FDA in September 2006 and is marketed under the brand name Noxafil® by Schering-Plough.

The echinocandins are the newest class of products to enter the IV antifungal market. These exhibit fewer of the CAB side effects but, like the triazoles, have a more limited spectrum of activity and less clinical data supporting widespread use across a variety of fungal pathogens. Caspofungin (marketed under the brand name Cancidas® by Merck) was approved in the U.S. in January 2001 and was the first echinocandin to receive FDA approval. In March 2005, the FDA approved the second echinocandin, micafungin sodium for injection and in May 2005, Astellas launched this product under the brand name Mycamine® in the U.S. Caspofungin is indicated for the treatment of invasive aspergillosis in patients who are refractory to or intolerant of other therapies, esophageal candidiasis and candidemia. Micafungin is indicated for the treatment of esophageal candidiasis and prophylaxis of candida infections in patients undergoing hematopoietic stem cell transplantation. In February 2006, the FDA approved the third echinocandin, anidulafungin, (marketed under the brand name Eraxis™ by Pfizer). Anidulafungin is indicated for the treatment of esophageal candidiasis, candidemia and other candida infections.

### *Adagen*

Prior to the development of Adagen, the only treatment available to patients afflicted with adenosine deaminase or ADA-deficient SCID was a well-matched bone marrow transplant. Completing a successful transplant depends upon finding a matched donor, the probability of which is low. At present, researchers at various research centers worldwide have been treating ADA-deficient SCID patients with gene therapy, which if successfully developed, could compete against Adagen. The theory behind gene therapy is that cultured T-lymphocytes that are genetically engineered and injected back into the patient will express the adenosine deaminase enzyme permanently and at normal levels.

### *Oncaspar*

The current treatment of patients with ALL includes administering L-asparaginase along with the drugs vincristine, prednisone and daunomycin. Studies have shown that long-term treatment with L-asparaginase increases the disease-free survival in high risk patients. Oncaspar, our PEG-modified L-asparaginase product, is used to treat patients with ALL. Currently, there is one unmodified form of L-asparaginase available in the U.S. and several available in Europe. We believe that Oncaspar has an advantage over the unmodified forms of L-asparaginase of increased half life resulting in fewer injections. OPi SA (France) announced in November 2006, that the FDA accepted an IND for its product Erwinase® (Erwinia chrysanthemi L-asparaginase for injection) as a substitute for Escherichia coli-derived L-asparaginase for the treatment of patients with ALL. Erwinia chrysanthemi-derived L-asparaginase is immunologically distinct from E. coli L-asparaginase, the active ingredient in Oncaspar. Erwinase® is approved in several countries outside the U.S. for treatment of ALL and some other hematologic malignancies.

### *DepoCyt*

DepoCyt competes against generic unmodified or ara-C cytarabine, as well as methotrexate, another generic drug, in the treatment of lymphomatous meningitis. Both of these drugs have been used for oncology treatment for decades and DepoCyt does not have the same level of clinical experience as these drugs. Clinical trials have demonstrated, however, that DepoCyt provides certain clinical advantages versus generic unencapsulated cytarabine. In a randomized, multi-center trial of patients with lymphomatous meningitis, treated either with 50 mg of DepoCyt administered every two weeks or standard intrathecal chemotherapy administered twice a week, results showed that DepoCyt achieved a complete response rate of 41% compared with a complete response rate of 6% for unencapsulated cytarabine. In this study, complete response was prospectively defined as (i) conversion of positive to negative CSF cytology and (ii) the absence of neurologic

progression. DepoCyt has also demonstrated an increase in the time to neurologic progression of 78.5 days for DepoCyt versus 42 days for unencapsulated cytarabine.

### **Royalties**

#### *PEG-INTRON*

PEG-INTRON, marketed by Schering-Plough, competes directly with Hoffmann-La Roche's Pegasys. Schering-Plough and Hoffmann-La Roche have been the major competitors in the global alpha interferon market since the approval of their unmodified alpha interferon products, INTRON A and ROFERON-A, respectively. Due to the December 2004 launch of PEG-INTRON combination therapy in Japan, our PEG-INTRON royalties have increased over prior-year levels. In January 2007, Hoffmann-La Roche announced it received approval for its Pegasys combination therapy, Copegus (ribavirin) plus Pegasys (peginterferon alfa-2a (40KD)), by the Japanese regulatory agency. Currently in markets outside of Japan, the PEGylated interferon-based combination therapy is a highly competitive market. Further, Schering-Plough has reported that the overall hepatitis C market has been contracting. We cannot assure you that this market contraction and competitive conditions will not offset the near-term positive impact of PEG-INTRON sales in Japan, which could result in lower PEG-INTRON royalties to us. Additionally, there is much research being conducted on various formulations of alpha interferon as well as many compounds being investigated for the treatment of hepatitis C. It is possible that this research could lead to a competing product in the future.

#### *Macugen*

Macugen, marketed by OSI Pharmaceuticals, Inc. and Pfizer Inc., currently competes against three therapies for the treatment of neovascular (wet) age-related macular degeneration (AMD): photodynamic therapy with verteporfin, which was developed by QLT, Inc. and is marketed by Novartis AG; thermal laser treatment; and ranibizumab, marketed under the brand name Lucentis™ by Genetech. Ranibizumab, approved in June 2006, for the treatment of neovascular age-related macular degeneration, has provided significant competition to Macugen, which we expect to continue. Additional treatments for AMD are in various stages of preclinical or clinical testing. If approved, these treatments would also compete with Macugen.

### **Contract Manufacturing**

We are aware that other companies provide contract manufacturing for the pharmaceutical industry, including liposomal and PEGylation services such as Bell-Moore Labs, Ben Venue and Abbott One 2 One. These companies also provide manufacturing services from preclinical to commercial.

### **Technology**

#### *PEGylation*

We are aware that other companies are conducting research on chemically modified therapeutic proteins and that certain companies are modifying pharmaceutical products, including proteins, by attaching PEG. Our competitors include The Dow Chemical Company, Nektar Pharmaceuticals, Inc., SunBio Corporation, Mountain View Pharmaceuticals, Inc., Neose Technologies, Inc., NOF Corporation and Urigen Pharmaceuticals, Inc. Several other chemical, biotechnology and pharmaceutical companies may also be developing PEGylation technologies. Some of these companies license or provide the technology to other companies, while others develop the technology for internal use.

#### *Locked Nucleic Acid*

We are aware that other companies are conducting research and developing products utilizing antisense technologies that compete with the LNA technology. These include Isis Pharmaceuticals, Inc. Alnylam Pharmaceuticals, Inc., Regulus Therapeutics LLC, Eli Lilly and Company and others.

### *Product Candidates*

HIF-1 alpha antagonist. There are a number of existing therapeutic regimens designed to treat the cancers that we may target with the HIF-1 alpha antagonist. However, we are not aware of any development of another compound that would have a mechanism similar to our HIF-1 alpha antagonist.

PEG-SN38. There are a number of drugs in various stages of preclinical and clinical development from companies exploring cancer therapies or improved chemotherapeutic agents to potentially treat the same cancer indications that our PEG-SN38 may be developed to treat. Additionally, there are a number of drugs in development based on the active metabolite SN38. If these drugs are approved, they could compete directly with our PEG-SN38. These include products in development from Bristol-Myers Squibb Company, Pfizer Inc., GlaxoSmithKline plc, Antigenics Inc., F. Hoffman-La Roche Ltd., Novartis AG, Cell Therapeutics, Inc., Neopharm, Inc., Mediatech Research Limited and others. Nektar Therapeutics is also developing a PEGylated form of irinotecan. Irinotecan is a pro-drug of SN38. This product candidate is currently in Phase II for colorectal cancer. Nektar commenced Phase II studies in metastatic breast, platinum-resistant ovarian, cervical, and second-line colorectal cancer in January of 2009.

Survivin antagonist. There are a number of existing therapeutic regimens designed to treat the cancers that we may target with the Survivin antagonist. We are aware of several companies, including Isis Pharmaceuticals/Eli Lilly, Astellas, Erimos and Aegera, that are actively working on compounds targeting Survivin.

### **EMPLOYEES**

As of December 31, 2008, we employed 351 persons, including 40 persons with Ph.D. or M.D. degrees. At that date, 108 employees were engaged in research and development activities, 120 were engaged in manufacturing, 123 were engaged in sales, marketing and administration. To continue the improvement of our operating efficiencies, we undertook a reduction in our headcount at the beginning of 2009. As of February 2009, we had 326 employees. None of our employees are covered by a collective bargaining agreement. All of our employees are covered by confidentiality agreements. We consider our relations with our employees to be good.

### **Item 1A. Risk Factors**

Throughout this Annual Report on Form 10-K, we have made forward-looking statements in an attempt to better enable the reader to understand our future prospects and make informed judgments. By their nature, forward-looking statements are subject to numerous factors that may influence outcomes or even prevent their eventual realization. Such factors may be external to Enzon and entirely outside our control.

We cannot guarantee that our assumptions and expectations will be correct. Failure of events to be achieved or of certain underlying assumptions to prove accurate could cause actual results to vary materially from past results and those anticipated or projected. We do not intend to update forward-looking statements.

Certain risks and uncertainties are discussed below. It is not possible to predict or identify all such factors, however. Accordingly, you should not consider this recitation to be complete.

### **Risks Related to Our Business**

If any of these risks are realized our business, prospects, financial condition, results of operations and our ability to service debt could be materially adversely affected.

#### ***We expect to incur losses over the next several years.***

As of December 31, 2008, we had an accumulated deficit of \$302.2 million. We expect to incur losses over the next several years, including for the year ending December 31, 2009, as we expect to make significant research and development expenditures.

Our ability to achieve long-term profitability will depend primarily on:

- the success of our research and development programs;

- the continued sales of our marketed products and the products on which we receive royalties; and
- our and our licensees' ability to develop and obtain regulatory approvals for additional product candidates.

***Development of any successful product candidates is highly uncertain due to the extended testing and regulatory review process required before marketing clearance can be obtained and failure to develop, obtain regulatory approval and commercialize our product candidates could materially harm our business.***

There is a high risk of failure for pharmaceutical product candidates. Only a small minority of all research and development programs ultimately result in commercially successful drugs. We may never succeed in developing an approved drug. Further, due to the extended testing and regulatory review process required before marketing clearance can be obtained, the time periods before commercialization of any of these products are long and uncertain. Risks during development and commercialization include the possibility that:

- any or all of our product candidates will be found to be ineffective;
- our product candidates will have adverse side effects or will otherwise fail to receive the necessary regulatory approvals;
- our product candidates may be effective but uneconomical to manufacture or market; or
- our competitors may market equivalent or superior products.

The risk of failure is increased for our product candidates that are based on new technologies or approaches to the development of therapeutics. For example, the LNA technology is a novel technology and there are currently no approved drugs, or even late-stage drug candidates, employing this technology. Product candidates employing these technologies may not advance to pivotal stages of product development or demonstrate clinical safety or efficacy. If we do not succeed in the development of these product candidates, or if our technologies fail to generate products, our business could be materially harmed.

At the present time, the vast majority of our research and development operations are focused on the early stages of product research and development, and we are conducting or first commencing clinical trials on our product candidates. Success in preclinical testing and early clinical trials does not necessarily predict success in later clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later-stage clinical trials due to such factors as inconclusive results and adverse medical events, even after achieving positive results in earlier trials. If our product candidates fail in the clinical trial stage, it could materially harm our business prospects.

From time to time, we may establish and announce certain development goals for our product candidates and programs; however, given the complex nature of the drug discovery and development process, it is difficult to predict accurately if and when we will achieve these goals. If we are unsuccessful in advancing our preclinical programs into clinical testing or in obtaining regulatory approval, our business prospects may be harmed.

We do not expect any of the drugs resulting from our current research and development efforts to be commercially available for several years, if at all. In order to fill our pipeline of product candidates under development, we may attempt to acquire rights to products under development by other companies. The competition for the acquisition of rights to products that are viewed as viable candidates for successful development and commercialization is intense, and we will be competing for such opportunities with many companies with resources that are substantially greater than ours.

As an example, we recently discontinued our Phase Ib clinical trials for our rhMBL product candidate. These trials did not produce results that would support advancing the compound to further clinical trials.

***Our financial results are heavily dependent on the continued sales of our marketed products and the products on which we receive royalties; if revenues from these products fail to increase or materially decline, our results of operations, financial position and prospects could be materially harmed.***

Our results of operations are heavily dependent on the revenues we derive from the sale and marketing of our products Oncaspar, DepoCyt, Abelcet and Adagen as well as the royalty revenues we receive on the sale of PEG-INTRON, marketed by Schering-Plough. As a consequence of the significance of these products to us, stagnation or decline in the sales of one or more of them could adversely affect our operating results, financial position and prospects.

Sales of our products can be affected by, among other things, competition, patient demand and manufacturing issues. We cannot assure you that Schering-Plough will continue to be successful in marketing PEG-INTRON. The amount and timing of resources dedicated by Schering-Plough to the marketing of PEG-INTRON is not within our control. Our royalty revenues will be negatively affected if sales of PEG-INTRON are limited for any reason, including if Schering-Plough cannot market PEG-INTRON as a result of manufacturing, regulatory or other issues.

***Sales of PEG-INTRON and Abelcet have been adversely affected by competitive products introduced into their respective markets and we have experienced in the past and may continue to experience in the future a decline in sales of Abelcet, which if not reversed, will adversely affect our results of operations, financial condition and prospects.***

Products that compete with both PEG-INTRON and Abelcet have been and potentially will be introduced by other drug manufacturers into their respective markets.

Hoffmann-La Roche's Pegasys, a competing PEGylated interferon-based combination therapy, has resulted in significant competitive pressure on PEG-INTRON sales in the U.S. and all international markets. Pegasys has taken market share away from PEG-INTRON and the overall market for PEGylated alpha-interferon for the treatment of hepatitis C has been contracting. As a result, sales of PEG-INTRON in certain markets where it competes with Pegasys and the royalties we receive on those sales have declined. We cannot assure you that Pegasys will not continue to gain market share at the expense of PEG-INTRON which could result in lower PEG-INTRON sales and lower royalties to us. While we receive a royalty on sales of Pegasys under our Nektar agreement, it is a smaller royalty than that received on sales of PEG-INTRON and our royalties on Pegasys end in October 2009.

Similarly, the continued sale of newer products from Merck, Pfizer, Schering-Plough and Astellas Pharma in the antifungal market (where Abelcet competes) has negatively impacted Abelcet sales as clinicians utilize these other therapeutic agents. Pfizer and Schering-Plough have each recently obtained approval for an additional new product in the antifungal market that is expected to further increase competition. In addition, Astellas Pharma and Gilead Sciences, Inc. are currently marketing AmBisome, and Three Rivers Pharmaceuticals, Inc. is marketing Amphotec, each of which is a lipid-based version of amphotericin B, for the treatment of fungal infections. AmBisome and Amphotec each compete with Abelcet which has resulted in greater competitive pressure on Abelcet sales. During calendar year 2007, we continued to experience increasing pricing pressure with respect to Abelcet. In particular, Astellas Pharma and Gilead Sciences, Inc., have aggressively lowered the price of their product in certain regions and for certain customers in the U.S. This has resulted in the shrinkage or loss of certain of our customer accounts. While we are developing and implementing strategies to address the competitive threats facing Abelcet, we cannot assure you that we will be able to increase sales of Abelcet or prevent further decreases in Abelcet sales. If we are not successful in addressing the competitive threats, it could adversely affect our operating results, financial condition and prospects.

***If our contract manufacturing customers terminate their agreements with us and we fail to replace contract manufacturing for third parties, we will lose revenues and our costs of goods on our own products will increase.***

We utilize excess manufacturing capacity to provide contract manufacturing services for a number of third parties. This provides revenues and also allows us to spread fixed costs of our manufacturing facility across

those third party products in addition to our own products manufactured at that facility. If the volume of contract manufacturing services decreases, our revenues from those activities will decrease. Additionally, a greater portion of the fixed costs of our facility will be allocated to our products, which will increase the overall cost of goods on those products.

Currently, we manufacture Abelcet (for sale outside of the U.S. and Canada) and Myocet, both for Cephalon. Our manufacturing agreements with Cephalon are scheduled to expire on January 1, 2010 for Myocet and November 22, 2011 for Abelcet. We also currently manufacture the injectable multivitamin MVI for Hospira. Pursuant to a notice of termination from Hospira, our manufacturing agreement with Hospira will terminate effective April 30, 2010. Other of our manufacturing agreements do not have long term commitments.

If we fail to enter into new manufacturing agreements with third parties to replace agreements that terminate, our revenues, cost of goods and our overall profit margins will suffer.

***We will need to obtain additional financing to meet our future capital needs and our significant debt level may adversely affect our ability to do so. Failure to do so could materially and adversely affect our business, financial condition and operations.***

Our current development projects and marketing initiatives require substantial capital. We will continue to expend substantial resources for research and development, including costs associated with developing our product candidates and conducting clinical trials. We believe that our current cash and investments and our anticipated cash flow from operations will be adequate to satisfy our capital needs for the near future, but we will likely need to increase our cash flow from operations or obtain financing to meet our future capital needs, which we expect will be substantial. We will require substantial additional funds to conduct research activities, preclinical studies, clinical trials and other activities relating to the successful commercialization of potential products. In addition, we may seek to acquire additional products, technologies and companies, which could require substantial capital. The competitive pressures impacting PEG-INTRON and Abelcet will cause our cash flow from operations to decrease rather than increase in the future and we cannot be sure that additional funds from other sources will be available on commercially reasonable terms, if at all. If adequate funds are unavailable from operations or additional sources of financing, we may have to delay, reduce the scope of or eliminate one or more of our research or development programs or one or more of our potential acquisitions of technologies or companies, which could materially and adversely affect our business, financial condition and operations.

We may seek to raise any necessary additional funds through equity or debt financings, collaborative arrangements with corporate partners or other sources which may be dilutive to existing stockholders. We cannot assure you that we will be able to obtain additional funds on commercially reasonable terms, if at all, particularly if the current macroeconomic trends continue.

As of December 31, 2008, we had \$270.5 million of outstanding indebtedness related to our outstanding that are due in 2013 convertible notes. Our significant debt level could limit our ability to obtain additional financing and could have other important negative consequences, including:

- increasing our vulnerability to general adverse economic and industry conditions;
- requiring the dedication of a substantial portion of our expected cash flow from operations to service our indebtedness, thereby reducing the amount of our expected cash flow available for other purposes;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete;
- placing us at a possible competitive disadvantage relative to less leveraged competitors and competitors that have better access to capital resources; and
- making it difficult or impossible for us to pay the principal amount of the 2013 notes at maturity, or the repurchase price of the 2013 notes upon a fundamental change, including accrued and unpaid interest.

***We depend on our collaborative partners; if we lose our collaborative partners or they do not apply adequate resources to our collaborations, our product development and financial performance may suffer.***

We rely and will depend heavily in the future on collaborations with partners, primarily pharmaceutical and biotechnology companies, for one or more of the research, development, manufacturing, marketing and other commercialization activities relating to our product candidates. In particular, we depend on Santaris for development of additional LNA compounds. If we lose our collaborative partners, or if they do not apply adequate resources to our collaborations, our product development and financial performance may suffer.

The amount and timing of resources dedicated by our collaborators to their collaborations with us are not within our control. If any collaborator breaches or terminates its agreements with us or fails to conduct its collaborative activities in a timely manner, the commercialization of our product candidates could be slowed or blocked completely. For example, Santaris can terminate its agreement with respect to a specific LNA compound provided by Santaris if we do not achieve certain development milestones for that compound. In addition, our collaborative partners may change their strategic focus, pursue alternative technologies or develop alternative products as a means for developing treatments for the diseases targeted by these collaborative programs and these could compete with products we are developing. Also, due to the recent tightening of global credit, there may be a disruption or delay in the performance of our collaborators' commitments. If such third parties are unable to satisfy their commitments to us, our business would be adversely affected.

Further, our collaborations may not be successful. Disputes may arise between us and our collaborators as to a variety of matters, including financing obligations under our agreements and ownership of intellectual property rights. These disputes may be both expensive and time-consuming and may result in delays in the development and commercialization of products. If any of the product candidates that we are commercializing with collaborators are delayed or blocked from entering the market or we experience increased costs as a result of our relationship with our collaborators, our financial performance could be adversely affected.

***We purchase some of the compounds utilized in our products from a single source or a limited group of suppliers, and the partial or complete loss of one of these suppliers could cause production delays and a substantial loss of revenues.***

We purchase the unmodified compounds and bulk PEGs utilized in our approved products and products under development from outside suppliers. In some cases, we have a limited number of suppliers. Moreover, in some cases, we have no supply agreement. Specifically, our ability to obtain compounds for our respective products may be limited by the following factors.

*Oncaspar.* We have supply agreements with Ovation Pharmaceuticals, Inc. and Kyowa Hakko to produce the unmodified forms of L-asparaginase, the active ingredient used in the production of Oncaspar. Our agreement with Ovation Pharmaceuticals, Inc. provides for Ovation to supply L-asparaginase to us through 2009. We have committed to effectuate a technology transfer of the cell line and manufacturing of the L-asparaginase to our own supplier by December 31, 2009, and then supply L-asparaginase back to Ovation during the years 2010-2012. It is possible that we will not be able to successfully complete the technology transfer by the deadline or at all, due to technological, manufacturing, regulatory, clinical development or other issues. If we are unable to effectuate the technology transfer by the deadline, we may not be able to manufacture or sell Oncaspar, which would result in a substantial loss of revenues and damage to our business. Also, if we are unable to supply L-asparaginase back to Ovation during the years 2010-2012, we could be required to pay damages to Ovation in the amounts of \$5.0 million in 2010, \$10.0 million in 2011 and \$15.0 million in 2012 in connection with a breach of our obligation to supply L-asparaginase to them.

*Adagen.* We purchase the unmodified adenosine deaminase enzyme used in the manufacture of Adagen from Roche Diagnostics. Roche Diagnostics, which is based in Germany, is the only FDA-approved supplier of the adenosine deaminase enzyme, or ADA, used in Adagen. During 2002, we obtained FDA approval of the use of the ADA enzyme obtained from bovine intestines from cattle of New Zealand origin. New Zealand currently certifies that its cattle are bovine spongiform encephalopathy (BSE or mad cow disease) free. Beginning in September 2002, the U.S. Department of Agriculture (USDA) required all animal-sourced materials shipped to the U.S. from any European country to contain a veterinary certificate that the product is BSE free, regardless

of the country of origin. Our ADA supply agreement with Roche Diagnostics terminated in 2004 although we are still receiving our supply of ADA from them. We are currently developing ADA using a recombinant source as an alternative to the naturally-derived bovine product. This is a difficult and expensive undertaking as to which success cannot be assured. Roche Diagnostics continues to supply us with our requirements of ADA and indicated when they terminated the supply agreement that they will continue to do so for a reasonable period of time as we work to develop another source of ADA. We may have little or no notice if Roche Diagnostics decides to stop supplying us with ADA. If we are unable to secure an alternative source of ADA before Roche Diagnostics discontinues supplying the material to us, may experience inventory shortages and potentially a period of product unavailability or a long-term inability to produce Adagen. If this occurs, it will have a measurable (and potentially material) negative impact on our business and results of operations and it could potentially result in significant reputational harm and regulatory difficulties.

*Abelcet.* In the manufacture of Abelcet, we combine amphotericin B with two phospholipids to produce an injectable lipid complex formulation of amphotericin B. We currently have a long-term supply agreement for amphotericin B, with Axellia. Additionally, we are seeking to qualify at least one additional source of supply of amphotericin B. We might not be able to obtain production and regulatory approval of Abelcet incorporating the alternative amphotericin B.

In addition, due to recent tightening of global credit, there may be disruption or delay in the performance of our suppliers.

If we experience a delay in obtaining or are unable to obtain any compound for any of the products discussed above on reasonable terms, or at all, it could have a material adverse effect on our business, financial condition and results of operations. No assurance can be given that in any case alternative suppliers with appropriate regulatory authorizations could be readily identified if necessary. If we experience delays in obtaining or are unable to obtain any such compounds on reasonable terms, it could have a material adverse effect on our business, financial condition and results of operations.

If we are required to obtain an alternate source for an unmodified compound utilized in a product, the FDA and relevant foreign regulatory agencies will likely require that we perform additional testing to demonstrate that the alternate material is biologically and chemically equivalent to the unmodified compound previously used in our clinical trials. This testing could delay or stop development of a product, limit commercial sales of an approved product and cause us to incur significant additional expenses. If we are unable to demonstrate that the alternate material is chemically and biologically equivalent to the previously used unmodified compound, we will likely be required to repeat some or all of the preclinical and clinical trials conducted for the compound. The marketing of an FDA approved drug could be disrupted while such tests are conducted. Even if the alternate material is shown to be chemically and biologically equivalent to the previously used compound, the FDA or relevant foreign regulatory agency may require that we conduct additional clinical trials with the alternate material.

***Our product candidates must undergo extensive clinical testing, the results of which are highly uncertain and could substantially delay or prevent us from obtaining regulatory approval.***

Before we can market a product, we must obtain regulatory approval for a product candidate. To obtain regulatory approval, we must undertake extensive clinical testing in humans to demonstrate safety and efficacy to the satisfaction of the FDA and similar foreign regulatory authorities for each indication. The pre-clinical testing and clinical trials for any product candidates that we develop must comply with the regulations of numerous federal, state and local government authorities in the U.S., principally the FDA, and those of similar agencies in other countries. Clinical trials of new product candidates sufficient to obtain regulatory marketing approval are expensive and take years to complete.

Even though they consume substantial resources, the outcome of these trials is highly uncertain. Safety and efficacy results from pre-clinical studies involving animals and other models and from early clinical trials are often not accurate indicators of results of later-stage clinical trials that involve larger human populations, and, moreover, may not always be representative of results obtained while marketing an approved drug, particularly with regard to safety. In addition, we may suffer significant setbacks in clinical trials, even after achieving promising results in earlier trials. For example, Phase II activity may not replicate Phase I results or

Phase III efficacy data may not replicate Phase II data. Any adverse results from studies, including clinical trials, could have a negative effect on our ability to obtain the approval of the FDA or other regulatory agencies. Unfavorable results of clinical trials conducted by our competitors or other biotechnology companies could also adversely affect our ability to gain regulatory approval of our product candidates by increasing government examination and complexity of clinical trials. Government and public concerns over safety issues associated with pharmaceutical and biological products could potentially result in termination of clinical trials on entire classes of drug candidates, lengthen the trial process for product categories, increase legal and production costs relating to certain drug categories, and/or expand the safety labeling for approved products.

As an example, we recently discontinued our Phase Ib clinical trials for our rhMBL product candidate. These trials did not produce results that would support advancing the compound to further clinical trials.

Clinical development of any product candidate that we decide to take into clinical trials may be delayed or prevented at any time for some or all of the following reasons:

- negative or ambiguous results regarding the efficacy of the product candidate;
- undesirable side effects that delay or extend the trials or make the product candidate not medically or commercially viable;
- inability to recruit and qualify a sufficient number of patients for our trials;
- regulatory delays or other regulatory actions, including changes in regulatory requirements;
- difficulties in obtaining sufficient quantities of the product candidate manufactured under current good manufacturing practices;
- delays, suspension or termination of the trials imposed by us, an independent institutional review board for a clinical trial site, or clinical holds placed upon the trials by the FDA; and
- our failure to obtain adequate financial resources to fund these trials.

***We depend on third parties to conduct the clinical trials for our product candidates and any failure of those parties to fulfill their obligations could harm our development and commercialization plans.***

We depend on independent clinical investigators, contract research organizations, academic institutions and other third-party service providers to conduct clinical trials for our product candidates. Though we rely heavily on these parties for successful execution of our clinical trials, we are ultimately responsible for the results of their activities and many aspects of their activities are beyond our control. For example, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial, but the independent clinical investigators may prioritize other projects over ours or may fail to timely communicate issues regarding our products to us. Third parties may not complete activities on schedule or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols. The early termination of any of our clinical trial arrangements, the failure of third parties to comply with the regulations and requirements governing clinical trials or our reliance on results of trials that we have not directly conducted or monitored could hinder or delay the development, approval and commercialization of our product candidates and would adversely affect our business, results of operations and financial condition.

If our clinical trials are not successful, if we experience significant delays in these trials, or if we do not complete our clinical trials, we may not be able to commercialize our product candidates, which would materially harm our business.

***We depend on patents and proprietary rights, which may offer only limited protection against potential infringement and the development by our competitors of competitive products. The U.S. and foreign patents upon which our original PEG technology was based have expired.***

The pharmaceutical industry places considerable importance on obtaining patent and trade secret protection for new technologies, products and processes. Our success depends, in part, on our ability to develop and maintain a strong patent position for our products and technologies both in the U.S. and in other countries. If we are unable to obtain and enforce patent protection for our products and product candidates, our business

could be materially harmed. We have an extensive portfolio of issued U.S. patents and filed applications, many of which have foreign counterparts. These patents, if extensions are not granted, are expected to expire beginning in 2009 through 2028. Under our license agreements, we have exclusively licensed patents related to our commercial and development products. Of the patents owned or exclusively licensed by us, seven relate to PEG-INTRON, 17 relate to Abelcet and three relate to DepoCyt. Our products, Oncaspar and Adagen, are not covered by any unexpired patents. We have exclusively licensed patents from Santaris related to our HIF-1 alpha antagonist and our other LNA compounds in development. Although we believe that our patents provide certain protection from competition, we cannot assure you that such patents will be of substantial protection or commercial benefit to us, will afford us adequate protection from competing products, or will not be challenged or declared invalid. In addition, we cannot assure you that additional U.S. patents or foreign patent equivalents will be issued to us.

Issued patents may be challenged, invalidated or circumvented. In addition, court decisions may introduce uncertainty in the enforceability or scope of patents owned by biotechnology and pharmaceutical companies. The legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of foreign countries may not protect our rights to the same extent as the laws of the U.S. Therefore, enforceability or scope of our patents in the U.S. or in foreign countries cannot be predicted with certainty, and, as a result, any patents that we own or license may not provide sufficient protection against competitors. We may not be able to obtain or maintain patent protection for our pending patent applications, those we may file in the future, or those we may license from third parties.

While we believe that our patent rights are enforceable, we cannot assure you that any patents that we have issued, that we may issue or that may be licensed to us will be enforceable or valid or will not expire prior to the commercialization of our product candidates, thus allowing others to more effectively compete with us. Therefore, any patents that we own or license may not adequately protect our product candidates or our future products. If we are not able to protect our patent positions, our business could be materially harmed.

We may become aware that certain organizations are engaging in activities that infringe certain of our patents, including our PEG and single-chain antibody, or SCA, technology patents. We cannot assure you that we will be able to enforce our patents and other rights against such organizations.

Legal or administrative proceedings may be necessary to defend against claims of infringement or to enforce our intellectual property rights. We have in the past been involved in patent litigation and other proceedings and we may likely become involved in additional patent litigation or proceedings in the future. If we become involved in any such litigation or proceeding, irrespective of the outcome, we may incur substantial costs, the efforts of our technical and management personnel may be diverted, and such disputes could substantially delay or prevent our product development or commercialization activities, which could materially harm our business, financial condition and results of operations.

***Blocking patents or claims of infringement may stop or delay the development of our proprietary products.***

Other entities may have or obtain proprietary rights that could impair our competitive position. Our commercial success depends in part on avoiding claims of infringement of the patents or proprietary rights of such third parties. Although we investigate the patent protection surrounding our technology and product candidates, there are numerous patents, each with multiple claims, which makes it difficult to uncover and interpret the extent of patent protection which can lead to uncertainty about our freedom to operate. It is possible that we will not be aware of issued patents or pending patent applications that are relevant to our product candidates because our searches do not find them or because they are not yet publicly available. Our interpretation of patents could be challenged, leading to litigation, and we could face claims of infringement of rights of which we are unaware.

There have been significant litigation and interferences proceedings regarding patent rights, and the patent situation regarding particular products is often complex and uncertain. As we proceed with the development of our product candidates, we may face uncertainty and litigation could result, which could lead to liability for damages, prevent our development and commercialization efforts and divert resources from our business strategy.

Third parties from time to time may assert that we are infringing their patents, trade secrets, or know-how. In addition, our technology may infringe patents that may issue in the future to third parties. We could incur substantial costs in defending ourselves and our partners against any such claims. Furthermore, parties making such claims may be able to obtain injunctive or other equitable relief, which could effectively block our ability or our partners' ability to further develop or commercialize some or all of our products or technology in the U.S. and abroad, and could result in the award of substantial damages. If we are found to infringe, we may be required to obtain one or more licenses from third parties or be unable to proceed. We may not be able to obtain such licenses at a reasonable cost, if at all. Defense of any lawsuit or failure to obtain any such required license could have a material adverse effect on us.

***We may have to develop or license alternative technologies if we are unable to maintain or obtain key technology from third parties.***

We have licensed patents and patent applications from Santaris. Some of our proprietary rights have been licensed to us under agreements that have performance requirements or other contingencies. The failure to comply with these provisions could lead to termination or modifications of our rights to these licenses. Additionally, we may need to obtain additional licenses to patents or other proprietary rights from other parties to facilitate development of our proprietary technology base. The ownership of patents exclusively licensed to us may be subject to challenge if inventorship was not adequately investigated and represented. If our existing licenses are terminated or if we are unable to obtain such additional licenses on acceptable terms, our ability to perform our own research and development and to comply with our obligations under our collaborative agreements may be delayed while we seek to develop or license alternative technologies.

***The patents upon which our original PEG technology was based have expired and, as a result, the scope of our patent protection is narrower.***

The U.S. and corresponding foreign patents upon which our original PEG technology was based expired in 1996. Without that patent protection, other parties are permitted to make, use or sell products covered by the claims of those patents, subject to other patents, including those which we hold. We have obtained numerous patents with claims covering improved methods of attaching or linking PEG to therapeutic compounds. However, these patents may not enable us to prevent competition or competitors may develop alternative methods of attaching PEG to compounds potentially resulting in competitive products outside the protection that may be afforded by our patents. We are aware that others have also filed patent applications and have been granted patents in the U.S. and other countries with respect to the application of PEG to proteins and other compounds.

***We or our suppliers could experience delays or difficulties in manufacturing, including problems complying with the FDA's regulations for manufacturing our products. These problems could materially harm our business.***

Manufacturers of drugs must comply with current cGMP regulations, which include quality control and quality assurance requirements as well as the corresponding maintenance of records and documentation. Manufacturing facilities are subject to ongoing periodic inspection by the FDA and corresponding state agencies, including unannounced inspections of our commercial manufacturing facilities. We or our present or future suppliers may be unable to comply with the applicable cGMP regulations and other FDA regulatory requirements.

Adagen and Oncaspar, which we manufacture, use our earlier PEG technology which tends to be less stable than the PEG technology used in PEG-INTRON and our products under development. Due, in part, to the drawbacks in the earlier technologies we have had and may continue to have manufacturing problems with these products.

We continue to face manufacturing and stability issues with Oncaspar. To date, we have been unable to identify the cause of these issues. If we continue to have these issues with Oncaspar, we may have a disruption in our ability to manufacture Oncaspar. Manufacturing and stability problems have required us to implement voluntary recalls or market withdrawals for certain batches of Oncaspar periodically since 2002 and as recently

as the fourth quarter of 2006. Mandatory recalls can also take place if regulators or courts require them, even if we believe our products are safe and effective. Recalls result in lost sales of the recalled products themselves and can result in further lost sales while replacement products are manufactured or due to customer dissatisfaction. We cannot assure you that future product recalls or market withdrawals will not materially adversely affect our business, our financial condition, results of operations or our reputation and relationships with our customers. Disruption in supply or manufacturing difficulties relating to Oncaspar could cause a disruption in our ability to market and sell Oncaspar and result in a substantial loss of revenues.

The FDA and the MHRA, the British equivalent of the FDA, have conducted periodic inspections of our manufacturing facilities related to Abecet, Oncaspar and Adagen. Following certain of these inspections, the FDA has issued Form 483 reports citing deviations from cGMP, the most recent of which was issued in July 2008 for our Indianapolis facility. We have worked with the FDA to resolve the matters identified therein.

We are aware that the FDA has conducted inspections of certain of the manufacturing facilities of Schering-Plough, who manufactures PEG-INTRON, and Merck, who manufactures the L-asparaginase that we receive from Ovation Pharmaceuticals for use in the production of Oncaspar, and those inspections have resulted in the issuance of Forms 483 citing deviations from cGMP.

If we or our partners face additional manufacturing problems in the future or if we or our licensees are unable to satisfactorily resolve current or future manufacturing problems, the FDA could require us or our licensees to discontinue the distribution of our products or to delay continuation of clinical trials.

***Our arrangements with third-party manufacturers involve significant financial commitments and costs that may be incurred if we terminate or delay manufacturing.***

We depend on the manufacturing capabilities of third parties to manufacture drug substances used in certain of our products. Our contractual arrangements with these manufacturers require us to commit to planned manufacturing activities. If we were to terminate or delay these activities, we may be required to pay termination fees or other delay-related charges and these amounts may be significant. The need to terminate or delay planned manufacturing activities could arise from a delay in a clinical trial or regulatory approval, an inability to transfer our technology and complex processes to the third-party manufacturers or other reasons that may be beyond our control.

***We may be subject to a variety of types of product liability or other claims based on allegations that the use of our products has resulted in adverse effects, whether by participants in our clinical trials or by patients using our products, and our insurance may not cover all product liability or other claims.***

We may face liability claims related to the use or misuse of our products and product candidates in clinical trials or in commercial use. Liability claims may be expensive to defend and may result in large judgments against us.

Although we maintain product liability insurance for claims arising from the use of our products in clinical trials prior to FDA approval and for claims arising from the use of our products after FDA approval at levels that we believe are appropriate, we cannot assure you that we will be able to maintain our existing insurance coverage or obtain additional coverage on commercially reasonable terms for the use of our other products in the future. Also, our insurance coverage and our resources may not be sufficient to satisfy any liability resulting from product liability claims, and a product liability claim could materially harm our business, financial condition or results of operations.

Generally, our clinical trials are conducted in patients with serious life-threatening diseases for whom conventional treatments have been unsuccessful, and, during the course of treatment, these patients could suffer adverse medical effects or die for reasons that may or may not be related to our products. Any of these events could result in a claim of liability. Any such claims against us, regardless of their merit, could result in significant costs to defend or awards against us that could materially harm our business, financial condition or results of operations.

***We depend on key personnel and may not be able to retain these employees or recruit additional qualified personnel, which would harm our business.***

Because of the specialized scientific nature of our business, we are highly dependent upon qualified scientific, technical and managerial personnel, including our Chief Executive Officer. There is intense competition for qualified personnel in the pharmaceutical field. Therefore, we may not be able to attract and retain the qualified personnel necessary for the development of our business. Although we have employment agreements with our Chief Executive Officer, Chief Financial Officer and Chief Scientific Officer, our ability to continue to retain such officers, as well as other senior executives or key managers is not assured. The loss of the services of one or a combination of our senior executives, particularly our Chief Executive Officer, Chief Financial Officer and Chief Scientific Officer, as well as the failure to recruit additional key scientific, technical and managerial personnel in a timely manner, would have an adverse effect on our business.

## **Risks Related to Our Industry**

***Significant competition for our technology platforms and product candidates could make our technologies or product candidates obsolete or uncompetitive, which would negatively impact our business, results of operations and financial condition.***

The biopharmaceutical industry is characterized by extensive research and development effort, and rapid technological change. Our future success will depend on our ability to maintain a competitive position with respect to technological advances. Rapid technological development by others may result in our product candidates and technologies becoming obsolete.

We face intense competition from established biotechnology and pharmaceutical companies, as well as academic and research institutions that are pursuing competing technologies and products. We know that competitors are developing or manufacturing various platform technologies and products that are used for the prevention, diagnosis or treatment of diseases that we have targeted for product development. For example, PEG INTRON faces increased competition from Hoffman La-Roche's Pegasys, Abelcet faces increased competition from Astellas Pharma and Gilead Pharmaceuticals' AmBisome and Three Rivers Pharmaceuticals' Amphotec. DepoCyt competes with the generic drugs, cytarabine and methotrexate, and Oncaspar competes with ELSPAR® (asparaginase). In November 2006, the FDA accepted an IND for OPiSA (France) for its product, Erwinase (Erwinia chryanthemi L-asparaginase). Erwinase is approved in several countries outside the U.S. for treatment of ALL. Other existing and future products, therapies and technological approaches will compete directly with our products. Current and prospective competing products may provide greater therapeutic benefits for a specific problem or may offer comparable performance at a lower cost. In addition, any product candidate that we develop and that obtains regulatory approval must then compete for market acceptance and market share.

Our competitors in the PEGylation technology field include The Dow Chemical Company, Nektar Pharmaceuticals, Inc., SunBio Corporation, Mountain View Pharmaceuticals, Inc., Neose Technologies, Inc., NOF Corporation and Urigen Pharmaceuticals, Inc. Several other chemical, biotechnology and pharmaceutical companies may also be developing PEGylation technologies. Some of these companies license or provide the technology to other companies, while others develop the technology for internal use.

Other companies are conducting research and developing products utilizing antisense technologies that compete with the LNA technology. These include Isis Pharmaceuticals Inc., Alnylam Pharmaceuticals, Inc., Regulus Therapeutics LLC, Eli Lilly and Company and others. In addition, there are a number of existing therapeutic regimens designed to treat the cancers that we may target with the HIF-1 alpha antagonist. However, we are not aware of any development of another compound that would have a mechanism similar to our HIF-1 alpha antagonist.

There are a number of drugs in various stages of preclinical and clinical development from companies exploring cancer therapies or improved chemotherapeutic agents to potentially treat the same cancer indications that our PEG-SN38 may be developed to treat. Additionally, there are a number of drugs in development based on the active metabolite SN38. If these drugs are approved, they could compete directly with our PEG-SN38. These include products in development from Bristol-Myers Squibb Company, Pfizer Inc., GlaxoSmithKline plc,

Antigenics Inc., Hoffman-La Roche Ltd., Novartis AG, Cell Therapeutics, Inc., Neopharm, Inc., Meditech Research Limited and others. Nektar Therapeutics is also developing a PEGylated form of irinotecan. Irinotecan is a pro-drug of SN38. This product candidate is currently in Phase II for colorectal cancer. Nektar commenced Phase II studies in metastatic breast, platinum-resistant ovarian, cervical, and second-line colorectal cancer in January of 2009.

There are a number of existing therapeutic regimens designed to treat the cancers that we may target with the Survivin antagonist. We are aware of several companies, including Isis Pharmaceuticals/Eli Lilly, Astellas, Erimos and Aegera, that are actively working on compounds targeting Survivin.

Also, we are aware that other companies provide contract manufacturing for the pharmaceutical industry, including liposomal and PEGylation services such as Bell-Moore Labs, Ben Venue and Abbott One 2 One. These companies also provide manufacturing services from preclinical to commercial.

Many of our competitors have substantially greater research and development capabilities and experience and greater manufacturing, marketing and financial resources than we do. In addition, many of our competitors have much more experience than we do in pre-clinical testing and human clinical trials of new drugs, as well as in obtaining FDA and other regulatory approval. We face competition from these companies not just in product development but also in areas such as recruiting employees, acquiring technologies that might enhance our ability to commercialize products, establishing relationships with certain research and academic institutions, enrolling patients in clinical trials and seeking program partnerships and collaborations with larger pharmaceutical companies. Accordingly, our competitors may develop technologies and products that are superior to those we or our collaborators are developing and render our technologies and products or those of our collaborators obsolete and noncompetitive. If we cannot compete effectively, our business and financial performance would suffer.

***The regulatory approval process is highly uncertain and we will not be allowed to market products if regulatory approval has not been obtained.***

The marketing of pharmaceutical products in the U.S. and abroad is subject to stringent governmental regulation. The sale of any new products for use in humans in the U.S. requires the prior approval of the FDA for each new product. If our products are marketed abroad, they will also be subject to extensive regulation by foreign governments, whether or not we have obtained FDA approval for a given product and its indications. The FDA has established mandatory procedures and safety standards that apply to the clinical testing and marketing of pharmaceutical products. The FDA regulates the research, development, pre-clinical and clinical testing, manufacture, safety, effectiveness, record-keeping, reporting, labeling, storage, approval, advertising, promotion, sale, distribution, import and export of pharmaceutical and biological products. Obtaining FDA approval for a new therapeutic product may take many years and involve substantial expenditures. Compliance with these regulations can be costly, time-consuming and subject us to unanticipated delays in developing our products. Neither we nor our licensees may be able to obtain or maintain FDA or other relevant marketing approval for any of our products.

There may be limitations placed on our ability to successfully market our products by the FDA or foreign regulators.

Regulatory approval may:

- limit the indicated uses for a product;
- otherwise limit our ability to promote, sell and distribute the product;
- require that we conduct costly post-marketing surveillance; and
- require that we conduct ongoing post-marketing studies

Material changes to an approved product, such as manufacturing changes or revised labeling, may require further regulatory review and approval. Once obtained, any approvals may be withdrawn for a number of reasons, including the later discovery of previously unknown problems with the product, such as a safety issue. If we or our third-party manufacturers fail to comply with applicable regulatory requirements at any stage during the regulatory process, such noncompliance could result in:

- refusals or delays in the approval of applications or supplements to approved applications;
- refusal of a regulatory authority, including the FDA, to review pending market approval applications or supplements to approved applications;
- warning letters;
- import or export restrictions;
- product recalls or seizures;
- injunctions;
- total or partial suspension of production;
- fines, civil penalties or criminal prosecutions; and
- withdrawals of previously approved marketing applications or licenses.

In addition, any approved products are subject to continuing regulation. Among other things, the holder of an approved biologic license application or new drug application is subject to periodic and other FDA monitoring and reporting obligations, including obligations to monitor and report adverse events and instances of the failure of a product to meet the specifications in the biologic license application or new drug application. Application holders must also submit advertising and other promotional material to the FDA and report on ongoing clinical trials. Failure to meet these post-approval requirements can result in criminal prosecution, fines or other penalties, injunctions, recall or seizure of products, total or partial suspension of production, or denial or withdrawal of pre-marketing product approvals.

***Even if we are granted regulatory approval in one jurisdiction, we may not receive regulatory approval in another jurisdiction.***

Failure to obtain regulatory approval in foreign jurisdictions would prevent us from marketing our products abroad. In order to market our products in the European Union and many other jurisdictions outside the U.S., we must obtain separate regulatory approvals and comply with numerous foreign regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ from that required to obtain FDA approval. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA. We may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any market. The failure to obtain these approvals could materially harm our business, financial condition and results of operations.

If we or our licensees fail to obtain or maintain requisite governmental approvals or fail to obtain or maintain approvals of the scope requested, it will delay or preclude us or our licensees or marketing partners from marketing our products. It could also limit the commercial use of our products. Any such failure or limitation may have a material adverse effect on our business, financial condition and results of operations.

***Once approved, our products may not be accepted in the marketplace.***

Even if clinical trials demonstrate the safety and efficacy of our product candidates and all regulatory approvals are obtained, the commercial success of our products depends on gaining market acceptance among physicians, patients, third-party payors or the medical community. The degree of market acceptance will depend on many factors, including:

- the scope of regulatory approvals, including limitations or warnings contained in a product's FDA-approved labeling;
- establishment and demonstration of clinical efficacy and safety;
- cost-effectiveness of our products;
- alternative treatment methods and potentially competitive products; and

- the availability of third-party reimbursement.

Market acceptance could be further limited depending on the prevalence and severity of any expected or unexpected adverse side effects associated with our product candidates. If our product candidates are approved but do not achieve an adequate level of acceptance by physicians, third party payors and patients, we may never generate significant revenue from these products, and our business, financial condition and results of operations may be materially harmed.

***Our operations are subject to extensive environmental laws and regulations.***

Our operations are subject to federal, state and local environmental laws and regulations concerning, among other things, the generation, handling, storage, transportation, treatment and disposal of hazardous, toxic and radioactive substances and the discharge of pollutants into the air and water. Environmental permits and controls are required for some of our operations and these permits are subject to modification, renewal and revocation by the issuing authorities. If we were to become liable for an accident, or if we were to suffer an extended facility shutdown as a result of such contamination, we could incur significant costs, damages and penalties that could harm our business and exceed our resources or insurance coverage.

***The successful commercialization of our products and product candidates will depend on obtaining coverage and reimbursement for use of these products from third-party payors and these payors may not agree to cover or reimburse for use of our products.***

Our future revenues and profitability will be adversely affected if U.S. and foreign governmental, private third-party insurers and payors, and other third-party payors, including Medicare and Medicaid, do not agree to defray or reimburse the cost of our products to the patients. If these entities refuse to provide coverage and reimbursement with respect to our products or provide an insufficient level of coverage and reimbursement, our products may be too costly for many patients to afford them, and physicians may not prescribe them.

In addition, the amount of reimbursement for our products may also reduce our profitability. In the U.S., there have been, and we expect will continue to be, actions and proposals to control and reduce healthcare costs. Government and other third-party payors are challenging the prices charged for healthcare products and increasingly limiting, and attempting to limit, both coverage and level of reimbursement for prescription drugs.

If our products or product candidates are unable to obtain adequate coverage and reimbursement by third-party payors our ability to successfully commercialize our product candidates may be adversely impacted. Any limitation on the use of our products or any decrease in the price of our products will have a material adverse effect on our ability to achieve profitability.

In certain foreign countries, pricing, coverage and level of reimbursement of prescription drugs are subject to governmental control, and we may be unable to negotiate coverage, pricing, and reimbursement on terms that are favorable to us. In some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. Our results of operations may suffer if we are unable to market our products in foreign countries or if coverage and reimbursement for our products in foreign countries is limited.

***The law or FDA policy could change and expose us to competition from “generic” or “follow-on” versions of our products, which could adversely impact our business.***

Under current U.S. law and FDA policy, generic versions of conventional chemical drug compounds, sometimes referred to as small molecule compounds, may be approved through an abbreviated approval process. There is no abbreviated approval process under current law for biological products approved under the Public Health Service Act through a Biologic License Application, such as monoclonal antibodies, cytokines, growth factors, enzymes, interferons and certain other proteins. However, various proposals have been made to establish an abbreviated approval process to permit approval of generic or follow-on versions of these types of biological products under U.S. law, and the FDA’s counterpart in the European Union has recently approved a number of follow-on biologics. It is not clear whether any proposed legislation on generic or follow-on biologics will become law, or what form that law might take. However, if the law is changed or if the FDA somehow extends its existing authority in new ways, and third parties are permitted to obtain approvals of

versions of our biological products through an abbreviated approval mechanism, and without conducting full clinical studies of their own, it could adversely affect our business.

## **Risks Related to Our Common Stock and Our Convertible Notes**

*The price of our common stock has been, and may continue to be, volatile, which also may significantly affect the trading price of our convertible notes.*

Historically, the market price of our common stock has fluctuated over a wide range, and it is likely that the price of our common stock will continue to be volatile in the future. The market price of our common stock could be impacted due to a variety of factors, including, in addition to global and industry-wide events:

- the level of revenues we generate from our sale of products and royalties we receive;
- the losses we incur or the profits we generate;
- the results of preclinical testing and clinical trials by us, our collaborative partners or our competitors;
- announcements of technical innovations or new products by us, our collaborative partners or our competitors;
- the status of corporate collaborations and supply arrangements;
- regulatory approvals;
- developments in patent or other proprietary rights;
- public concern as to the safety and efficacy of products developed by us or others; and
- litigation.

In addition, due to one or more of the foregoing factors in one or more future quarters, our results of operations may fall below the expectations of securities analysts and investors. In that event, the market price of our common stock could be materially and adversely affected. Volatility in the price of our common stock may significantly affect the trading price of our convertible notes.

*Events with respect to our share capital could cause the shares of our common stock outstanding to increase.*

Sales of substantial amounts of our common stock in the open market, or the availability of such shares for sale, could adversely affect the price of our common stock. We had approximately 45 million shares of common stock outstanding as of December 31, 2008. As of that date, the following securities that may be exercised for, or are convertible into, shares of our common stock were outstanding:

- Options. Stock options to purchase 8.4 million shares of our common stock at a weighted average exercise price of approximately \$11.30 per share;
- 4% convertible senior notes due 2013 (the “2013 convertible notes”). Our 2013 convertible notes may be converted into 28.3 million shares of our common stock at a conversion price of \$9.55 per share.
- Restricted stock units. 1.8 million shares of our common stock issuable in respect of outstanding restricted stock units held by officers, employees and directors.

The shares of our common stock that may be issued under the options, restricted stock units, and the 2013 convertible notes are currently registered with the Securities and Exchange Commission, and, therefore, those shares of common stock that may be issued will be eligible for public resale.

The conversion of some or all of the convertible notes will dilute the ownership interests of existing stockholders. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the notes may encourage short selling by market participants because the conversion of the notes could depress the price of our common stock.

***Anti-takeover provisions in our charter documents and under Delaware law may make it more difficult to acquire us, even though such acquisitions may be beneficial to our stockholders.***

Provisions of our certificate of incorporation and bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us, even though such acquisitions may be beneficial to our stockholders. These anti-takeover provisions include:

- a classified board of directors whereby not all members of the board may be elected at one time;
- lack of a provision for cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- the ability of our board to authorize the issuance of “blank check” preferred stock to increase the number of outstanding shares and thwart a takeover attempt;
- advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- limitations on who may call a special meeting of stockholders.

Further, we have in place a stockholder rights plan, commonly known as a “poison pill.” The provisions described above, our stockholder rights plan and provisions of Delaware law relating to business combinations with interested stockholders may discourage, delay or prevent a third party from acquiring us. These provisions may also discourage, delay or prevent a third party from acquiring a large portion of our securities, or initiating a tender offer, even if our stockholders might receive a premium for their shares in the acquisition over the then current market price. We also have agreements with our executive officers that provide for change of control severance benefits which provides for cash severance, restricted stock and option award vesting acceleration and other benefits in the event our employees are terminated (or, in some cases, resign for specified reasons) following an acquisition. These agreements could discourage a third party from acquiring us.

***The issuance of preferred stock may adversely affect rights of common stockholders.***

Under our certificate of incorporation, our board of directors has the authority to issue up to three million shares of “blank check” preferred stock and to determine the price, rights, preferences and privileges of those shares without any further vote or action by our stockholders. The rights of the holders of common stock will be subject to the rights of the holders of any shares of preferred stock that may be issued in the future. In addition to discouraging a takeover, as discussed above, this “blank check” preferred stock may have rights, including economic rights senior to the common stock, and, as a result, the issuance of such preferred stock could have a material adverse effect on the market value of our common stock.

***We may be unable to redeem our 2013 convertible notes upon a fundamental change.***

We may be unable to redeem the 2013 convertible notes in the event of a fundamental change, as defined in the related indenture. Upon a fundamental change, holders of the 2013 convertible notes may require us to redeem all or a portion of the 2013 convertible notes. If a fundamental change were to occur, we may not have enough funds to pay the redemption price for all tendered 2013 convertible notes. Any future credit agreements or other agreements relating to our indebtedness may contain similar provisions, or expressly prohibit the repurchase of the 2013 convertible notes upon a fundamental change or may provide that a fundamental change constitutes an event of default under that agreement. If a fundamental change occurs at a time when we are prohibited from purchasing or redeeming 2013 convertible notes, we could seek the consent of our lenders to redeem the 2013 convertible notes or could attempt to refinance this debt. If we do not obtain a consent, we could not purchase or redeem the 2013 convertible notes. Our failure to redeem tendered 2013 convertible notes would constitute an event of default under the indenture governing the 2013 convertible notes.

The term fundamental change is limited to certain specified transactions as defined in the indenture governing the 2013 convertible notes and may not include other events that might adversely affect our financial condition or the market value of the 2013 convertible notes or our common stock. Our obligation to offer to redeem the 2013 convertible notes upon a fundamental change would not necessarily afford holders of the 2013 convertible notes protection in the event of a highly leveraged transaction, reorganization, merger or similar transaction involving us.

*The market for unrated debt is subject to disruptions that could have an adverse effect on the market price of the 2013 convertible notes, or a market for our notes may fail to develop or be sustained.*

The 2013 convertible notes are not rated. As a result, holders of the notes have the risks associated with an investment in unrated debt. Historically, the market for unrated debt has been subject to disruptions that have caused substantial volatility in the prices of such securities and greatly reduced liquidity for the holders of such securities. If the notes are traded, they may trade at a discount from their initial offering price, depending on, among other things, prevailing interest rates, the markets for similar securities, general economic conditions and our financial condition, results of operations and prospects. The liquidity of, and trading markets for, the notes also may be adversely affected by general declines in the market for unrated debt. Such declines may adversely affect the liquidity of, and trading markets for, the notes, independent of our financial performance or prospects. In addition, certain regulatory restrictions prohibit certain types of financial institutions from investing in unrated debt, which may further suppress demand for such securities. We cannot assure you that the market for the notes will not be subject to similar disruptions or that any market for our notes will develop or be sustained. Any such disruptions may have an adverse effect on the holders of the notes.

*We may not have sufficient funds available to pay amounts due under our 2013 convertible notes.*

We may not have sufficient funds available or may be unable to arrange for additional financing to satisfy our obligations under our 2013 notes. Our ability to pay cash to holders of the notes or meet our payment and other debt obligations depends on our ability to generate significant cash flow in the future. This, to some extent, is subject to general economic, financial, competitive, legislative and regulatory factors, as well as other factors that are beyond our control. Also, the indenture governing our 2013 convertible notes does not contain any financial or operating covenants or restrictions on the payments of dividends, the incurrence of indebtedness or the issuance or repurchase of securities by us or any of our subsidiaries. We cannot assure you that our business will generate cash flow from operations, or that future borrowings will be available to us in an amount sufficient to enable us to meet our payment obligations under the notes and our other obligations and to fund other liquidity needs.

#### **Item 1B. Unresolved Staff Comments.**

None.

#### **Item 2. Properties**

We own a 56,000 square foot manufacturing facility in Indianapolis, Indiana, at which we produce Abelcet, Oncaspar and Adagen for the Products segment and products we manufacture for others on a contract basis (Contract Manufacturing segment). Our Indianapolis facility is not subject to any mortgage.

The following are all of the facilities that we currently lease:

<b>Location</b>	<b>Principal Operations</b>	<b>Approx. Square Footage</b>	<b>Approx. Annual Rent</b>	<b>Lease Expiration</b>
20 Kingsbridge Road Piscataway, NJ	Research & Development	56,000	\$ 640,000 <sup>(1)</sup>	July 31, 2021
300 Corporate Ct. S. Plainfield, NJ	Idle	24,000	\$ 228,000	October 31, 2012
685 Route 202/206 Bridgewater, NJ	Administrative	51,000	\$ 1.4 million <sup>(2)</sup>	January 31, 2018

<sup>(1)</sup> Under the terms of the lease, annual rent increases over the remaining term of the lease from \$640,000 to \$773,000.

<sup>(2)</sup> Under the terms of the lease, annual rent increases over the remaining term of the lease from \$1.4 million to \$1.5 million.

We believe that our facilities are well maintained and generally adequate for our present and future anticipated needs.

The research and development activities at the Piscataway facility and the manufacturing facility in Indianapolis support the Products segment. The administrative functions in Bridgewater support all segments.

In February 2007, our board of directors approved a plan to consolidate our manufacturing operations in Indianapolis, Indiana from our South Plainfield, New Jersey facility in an effort to streamline operations and eliminate certain redundancies. The consolidation was completed during 2008. If we are unsuccessful in subletting the South Plainfield facility, we will be obligated to pay the annual rent through lease expiration of October 31, 2012. See Note 13 — Restructuring — to the accompanying consolidated financial statements.

**Item 3. *Legal Proceedings***

There is no pending material litigation to which we are a party or to which any of our property is subject.

**Item 4. *Submission of Matters to a Vote of Security Holders***

None.

## PART II

### Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

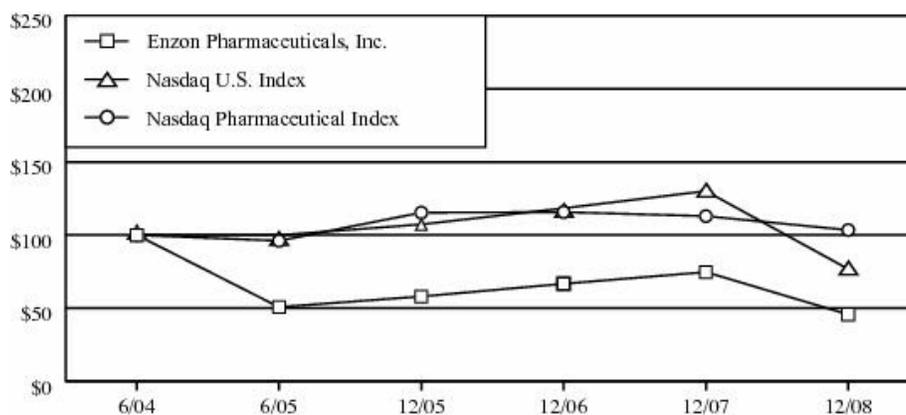
#### Market Information

Our common stock is traded on the NASDAQ Stock Market LLC under the trading symbol "ENZN".

The following table sets forth the high and low sale prices for our common stock during the years ended December 31, 2008 and December 31, 2007 as reported by the NASDAQ Stock Market LLC. The quotations shown represent inter-dealer prices without adjustment for retail markups, markdowns or commissions, and may not necessarily reflect actual transactions.

	High	Low
<b>Year Ended December 31, 2008</b>		
First Quarter	\$ 9.65	\$ 8.00
Second Quarter	9.85	7.00
Third Quarter	9.48	6.92
Fourth Quarter	7.53	2.95
<b>Year Ended December 31, 2007</b>		
First Quarter	\$ 9.16	\$ 7.96
Second Quarter	8.81	7.85
Third Quarter	8.85	6.44
Fourth Quarter	10.24	8.97

### Comparison of Cumulative Total Return



### Total Return To Shareholders (Includes reinvestment of dividends)

#### ANNUAL RETURN PERCENTAGE

Company/Index	Years Ending				
	6/05	12/05*	12/06	12/07	12/08
ENZON PHARMACEUTICALS, INC.	49.22	14.20	15.00	11.99	-38.82
NASDAQ INDEX	-0.11	7.42	10.27	9.93	-40.99
NASDAQ PHARMACEUTICAL INDEX	-3.95	20.09	0.29	-2.37	-8.40

#### INDEXED RETURNS

Company/Index	Base Period 6/04	Years Ending				
		6/05	12/05*	12/06	12/07	12/08
ENZON PHARMACEUTICALS, INC.	100	50.78	57.99	66.69	74.69	45.69
NASDAQ INDEX	100	99.89	107.30	118.32	130.07	76.76
NASDAQ PHARMACEUTICAL INDEX	100	96.05	115.35	115.68	112.93	103.44

\* Six-month data.

## Holders

As of March 4, there were 1,320 holders of record of our common stock.

## Dividends

We have never declared or paid any cash dividends on our common stock and do not anticipate paying any cash dividends in the foreseeable future. We currently intend to retain future earnings to fund the development and growth of our business.

## Item 6. Selected Financial Data

Set forth below is our selected financial data for the years ended December 31, 2008, 2007 and 2006, the six-month period ended December 31, 2005 and the two fiscal years ended June 30, 2005 and 2004 (in thousands, except per-share data):

	Year Ended December 31,			Six Months Ended	Year Ended June 30,	
	2008	2007	2006	December 31,	2005	2004
				2005 <sup>(1) (2)</sup>		
Consolidated Statement of Operations Data:						
Total revenues	\$ 196,938	\$ 185,601	\$ 185,653	\$ 73,699	\$ 166,250	\$ 169,571
Cost of product sales and contract manufacturing	61,702	54,978	50,121	23,216	46,023	46,986
Research and development <sup>(3)</sup>	58,089	54,624	42,907	13,812	36,544	34,036
Write-down of carrying value of investment	—	—	—	—	—	8,341
Acquired in-process research and development	—	—	11,000	10,000	—	12,000
Restructuring charge	2,117 <sup>(4)</sup>	7,741 <sup>(4)</sup>	—	—	2,053	—
Write-down of goodwill and intangibles	—	—	—	284,101 <sup>(5)</sup>	—	—
Gain on sale of royalty interest	—	(88,666) <sup>(6)</sup>	—	—	—	—
Other operating expenses <sup>(3)</sup>	71,977	66,430	71,125	35,485	71,055	61,166
Operating income (loss)	3,053	90,494	10,500	(292,915)	10,575	7,042
Investment income, net	5,967	10,918	24,670	3,248	4,360	13,396
Interest expense	(12,681)	(17,380)	(22,055)	(9,841)	(19,829)	(19,829)
Other, net	1,250	954	8,952	(2,776)	(6,768)	6,776
Income tax (provision) benefit	(304)	(1,933)	(758)	10,947	(77,944)	(3,177)
Net (loss) income	<u>\$ (2,715)</u>	<u>\$ 83,053</u>	<u>\$ 21,309</u>	<u>\$ (291,337)</u>	<u>\$ (89,606)</u>	<u>\$ 4,208</u>
Net (loss) income per common share:						
Basic	\$ (0.06)	\$ 1.89	\$ 0.49	\$ (6.69)	\$ (2.06)	\$ 0.10
Diluted	\$ (0.06)	\$ 1.29	\$ 0.46	\$ (6.69)	\$ (2.06)	\$ 0.10

No dividends have been declared.

	December 31,				June 30,	
	2008	2007	2006	2005	2005	2004
<b>Consolidated Balance Sheet Data:</b>						
Current assets	\$ 178,142	\$ 281,177	\$ 212,311	\$ 207,215	\$ 213,882	\$ 179,291
Current liabilities <sup>(7)</sup>	36,094	105,482	59,885	31,146	37,854	31,664
Total assets	349,253	420,357	403,830	341,345 <sup>(5)</sup>	650,861	722,410
Long-term debt <sup>(7)</sup>	267,550	275,000	397,642	394,000	399,000	400,000
Total stockholders' equity (deficit)	41,661	36,573	(56,441)	(83,970) <sup>(5)</sup>	203,502	289,091

<sup>(1)</sup> The Company adopted the provisions of Statement of Financial Accounting Standards No. 123R, "Share-Based Payment", effective July 1, 2005.

<sup>(2)</sup> The Company modified its royalty revenue estimation process in December 2005. As a result, there was a one-time one-quarter delay in recognition of certain significant royalty revenues from the six months ended December 31, 2005 into the year ended December 31, 2006.

<sup>(3)</sup> Beginning in 2008, certain patent-related legal costs were reclassified from research and development to general and administrative (other operating) expenses. The reclassified amounts for 2007, 2006, the six months ended December 31, 2005, and two fiscal years ended June 30, 2005 were: \$1.9 million, \$0.6 million, \$0.2 million, \$0.4 million and \$0.7 million, respectively.

<sup>(4)</sup> During 2007, the Company initiated a program to consolidate manufacturing operations at its Indianapolis, Indiana facility. Refer to Note 13 of the accompanying consolidated financial statements.

<sup>(5)</sup> The Company recognized impairments of Abelcet-related intangibles (\$133.1 million) and goodwill (\$151.0 million) in the six months ended December 31, 2005.

<sup>(6)</sup> The Company sold a 25-percent interest in its PEG-INTRON royalty in August 2007. Refer to Note 14 of the accompanying consolidated financial statements.

<sup>(7)</sup> As of December 31, 2008, \$2.95 million outstanding principal amount of 4% notes payable was classified as a current liability as a result of a tender offer commenced in December 2008. As of December 31, 2007, \$72.4 million outstanding principal amount of 4.5% notes payable was due July 1, 2008 and was classified as a current liability. The 4.5% notes were repaid in full according to their terms in 2008.

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

The following discussion of our financial condition and results of operations should be read together with our consolidated financial statements and notes to those statements included in Item 8 of Part II of this Form 10-K.

### **Overview**

We are a biopharmaceutical company dedicated to developing, manufacturing and commercializing important medicines for patients with cancer and other life-threatening conditions. We operate in three business segments: Products, Royalties and Contract Manufacturing. We have a portfolio of four marketed products, Oncaspar, DepoCyt, Abelcet and Adagen. Our drug development programs utilize several innovative approaches, including our industry-leading PEGylation technology platform and the Locked Nucleic Acid (LNA) technology. Our PEGylation technology was used to develop two of our products, Oncaspar and Adagen, and has created a royalty revenue stream from licensing partnerships for other products developed using the technology. We also engage in contract manufacturing opportunities for several pharmaceutical companies to broaden our revenue base.

## Results of Operations

### *Summary-level overview year ended December 31, 2008 compared to 2007*

Total revenues, in 2008 rose to \$196.9 million compared to \$185.6 million in 2007. Net product sales and contract manufacturing revenues both rose in 2008, contributing approximately \$19.1 million to total revenue growth for the year. Partially offsetting this increase was an 11-percent decline, or \$7.8 million, in royalty revenues during 2008. In August 2007, we sold a 25-percent interest in PEG-INTRON royalties, so an overall decrease in royalty revenues of 11 percent indicates underlying growth in the segment. Gross margins were slightly improved in 2008 compared to 2007 with efficiencies stemming from the consolidation of our manufacturing facilities beginning to be experienced late in 2008. Spending was up in both research and development and general and administrative areas. The primary cause of the incremental general and administrative costs was the evaluation of strategic alternatives and efforts to improve our capital structure totaling approximately \$5.0 million in 2008. We incurred \$2.1 million of restructuring charges which was \$5.6 million less than in 2007 and interest expense was lower in 2008 than in 2007 by \$4.7 million due primarily to the repayment of our 4.5% notes. Also, significantly affecting the year-to-year comparison, was the gain in 2007 of \$88.7 million on the sale of the 25-percent interest in PEG-INTRON royalties.

### *Summary-level overview year ended December 31, 2007 compared to 2006*

Total revenues of \$185.6 million were unchanged in 2007 compared to 2006. Products segment revenues remained constant as a group. A reduction in 2007 fourth-quarter royalty revenues from PEG-INTRON due to the sale of a 25-percent interest therein in August 2007 was offset by a rise in contract manufacturing revenues for the year. Income before tax for the year ended December 31, 2007 was \$85.0 million compared to \$22.1 million in 2006. Major operating factors contributing to the rise were the gain on the sale of the royalty interest of \$88.7 million partially offset by \$7.7 million of restructuring costs. Company-wide spending on research and development rose approximately \$11.7 million in 2007 compared to 2006, but acquired in-process research and development expenditures of \$11.0 million experienced in 2006 were not repeated in 2007. Other major effects include: \$7.0 million of legal costs related to securing the supply of Oncaspar raw material in 2006, not incurred in 2007; a \$13.8 million gain on sale of equity securities in 2006 not recurring in 2007 and lower interest expense in 2007 of \$4.7 million compared to 2006, due to the refinancing and repurchases of our debt.

Further discussion of these and other revenue and profitability fluctuations is contained in the segment analyses that follow.

The percentage changes throughout Management's Discussion and Analysis are based on amounts stated in thousands of dollars and not the rounded millions of dollars reflected in this section. Following is a reconciliation of segment profitability to consolidated (loss) income before income tax provision (millions of dollars):

### **Overview**

	<b>December 2008</b>	<b>Year Ended December 2007</b>	<b>December 2006</b>
Products segment profit	\$ 20.1	\$ 8.0	\$ 20.5
Royalties segment profit	59.5	156.0 <sup>(1)</sup>	70.6
Contract Manufacturing segment profit	7.2	4.4	2.3
Corporate and other expenses	(89.2)	(83.4)	(71.3)
(Loss) income before income tax provision	<u>\$ (2.4)</u>	<u>\$ 85.0</u>	<u>\$ 22.1</u>

<sup>(1)</sup> Includes \$88.7 million gain on sale of 25-percent interest in PEG-INTRON royalties.

We do not allocate certain corporate income and expenses not directly identifiable with the respective segments, including exploratory and preclinical research and development expenses, general and administrative expenses, depreciation, investment income, interest income, interest expense or income taxes. Research and development expense is considered a corporate expense unless it relates to an existing marketed product or a product candidate enters Phase III clinical trials at which time related costs would be chargeable to one of our operating segments.

## ***Products Segment***

Products segment profitability (millions of dollars):

	<b>December 2008</b>	<b>% Change</b>	<b>Year Ended December 2007</b>	<b>% Change</b>	<b>December 2006</b>
Revenues	\$ 113.8	13	\$ 100.7	—	\$ 101.0
Cost of product sales	45.4	9	41.8	9	38.3
Research and development	14.6	38	10.6	45	7.3
Selling and marketing	30.9	(3)	31.9	(6)	34.1
Amortization of intangibles	0.7	(6)	0.7	(5)	0.8
Restructuring charge	2.1	(73)	7.7	n.m.	—
Segment profit	<u>\$ 20.1</u>	151	<u>\$ 8.0</u>	(61)	<u>\$ 20.5</u>

n.m. — not meaningful

### *Revenues*

Sales performance of individual products is provided below (millions of dollars):

<b>Product</b>	<b>December 2008</b>	<b>% Change</b>	<b>Year Ended December 2007</b>	<b>% Change</b>	<b>December 2006</b>
Oncaspar	\$ 50.1	29	\$ 38.7	25	\$ 30.9
DepoCyt	9.0	5	8.6	4	8.3
Abelcet	26.9	(7)	28.9	(21)	36.5
Adagen	27.8	13	24.5	(3)	25.3
Totals	<u>\$ 113.8</u>	13	<u>\$ 100.7</u>	—	<u>\$ 101.0</u>

### *Year ended December 31, 2008 compared to 2007*

Net product sales grew approximately 13 percent during 2008, rising to \$113.8 million from \$100.7 million in 2007. Our oncology product, Oncaspar, for the first-line treatment of patients with acute lymphoblastic leukemia (ALL) and Adagen, our treatment for immunodeficiency, accounted for the majority of this increase. Oncaspar volume increased 5 percent year-over-year with the remaining Oncaspar revenue growth being attributable to a price increase effective in the first quarter of 2008. This price increase was necessitated by significantly higher raw material cost and expenses related to the development of manufacturing process improvements and transfer of technology from our supplier. See *Cost of product sales* and *Research and development expenses* below for further discussion regarding increased production costs and production process enhancements. Adagen sales were favorably affected by a first-quarter 2008 price increase. Abelcet, for the treatment of invasive fungal infections, continues to experience competitive pressures in the marketplace. The 7 percent decline in Abelcet net sales was the result of approximately 3 percent volume reduction and approximately 4 percent decrease in average net selling price. Sales of DepoCyt, for treatment of lymphomatous meningitis, and Adagen have historically experienced period-to-period fluctuations due to their small patient bases.

### *Year ended December 31, 2007 compared to 2006*

Net product sales of \$100.7 million for 2007 were largely unchanged on an aggregate basis from the total reached in 2006, however, the composition of sales by product reflected some significant shifts. Sales of Oncaspar, grew \$7.8 million or 25 percent in 2007 to \$38.7 million. The growth in volume of Oncaspar during

2007 was approximately 12 percent. The U.S. Food and Drug Administration (FDA) approved Oncaspar for the first-line treatment of patients with ALL in July 2006. The increase in Oncaspar sales was attributable to the continued transition to its first-line use and the adoption of protocols in pediatric and adult patients some of which call for dosage regimens that include a greater number of weeks of Oncaspar therapy. There was also an April 1, 2007 price increase. Sales of DepoCyt and Adagen, tend to fluctuate from period to period. Adagen sales in 2006 were somewhat elevated due to a newly negotiated distributor contract and that distributor adjusting inventory levels in line with industry norms. Both DepoCyt and Adagen were impacted by an April 1, 2007 price increase. In April 2007, the FDA granted full approval of DepoCyt. Originally, DepoCyt was conditionally approved under the FDA's Subpart H regulation. Sales of Abelcet, in the U.S. and Canada, at \$28.9 million, were 21 percent lower in 2007 than the \$36.5 million recorded in 2006 due to continued competition from the numerous therapeutics in the anti-fungal market.

#### *Cost of product sales*

Cost of sales of marketed products for the year ended December 31, 2008 increased to \$45.4 million, compared to \$41.8 million for the year 2007. Costs rose at a slower rate than did revenues resulting in a decrease in cost of product sales as a percentage of sales, to approximately 40 percent in 2008 from approximately 41 percent in 2007. A number of significant events occurring in the manufacturing facilities, processes and sourcing of materials combined to make 2008 a transition year for cost of products sold.

During the second-quarter of 2008, we incurred \$1.9 million of accelerated amortization associated with a \$5.0 million licensing milestone payment that was triggered during that quarter in connection with our rights to market and distribute Oncaspar. We immediately recorded the \$1.9 million of amortization to reflect the benefit derived from the intangible over the entire life of the agreement. The residual \$3.1 million of this milestone payment is being recognized in cost of sales over its remaining life of 6 years. In 2007, we incurred a \$1.9 million charge for validation batches produced in connection with the transfer of production of Oncaspar and Adagen from our South Plainfield, New Jersey facility to our Indianapolis, Indiana facility.

The cost of producing Oncaspar, as a percentage of Oncaspar sales, rose nearly 14 percent during 2008 compared to 2007 due primarily to the effects of raw material price increases under a December 2006 supply agreement. The full effect of this cost increase was not reflected in cost of products sold until the latter half of 2007 as compared to a full year in 2008. Largely offsetting the rise in Oncaspar costs were improvements in the cost of manufacture of Adagen and Abelcet which together comprise nearly half of total net sales. The improvements in the year-to-year comparisons of Adagen and Abelcet cost profiles are due in large part to certain batch write-offs experienced during 2007, including the validation batches referred to above in connection with the transfer of production to our Indianapolis facility. Overall, gross margins were favorably affected by increased selling prices effected early in 2008. Manufacturing efficiencies from the consolidation of our production facilities were not experienced until the fourth quarter of 2008 due to the timing of the completion of the consolidation. Their full effect should be realized in 2009, however, we expect some moderation of this favorable influence to come by way of increasing raw materials prices.

In 2007, cost of products sold, as a percentage of net sales, rose to approximately 41 percent from 38 percent in 2006. In December 2006, we entered into supply and license agreements with Ovation for the active ingredient used in the production of Oncaspar. A resulting license fee of \$17.5 million caused a \$2.3 million increase in 2007 amortization expense charged to Oncaspar cost of products sold. Higher supplier costs of materials and negative production variances contributed to lower Adagen and Abelcet margins, respectively, in 2007. Also, the ongoing transfer of production of Oncaspar and Adagen from our South Plainfield facility to our Indianapolis facility, discussed under restructuring below, resulted in \$1.9 million of cost related to required production test batches to validate the new production processes and assure continued product quality and stability.

#### *Research and development expenses*

Research and development spending related to marketed products has been directed largely towards securing and maintaining a reliable supply of the ingredients used in the production of Oncaspar and Adagen. Products segment research and development expense increased \$4.0 million or 38 percent during 2008

compared to 2007 which was up \$3.3 million or 45 percent over 2006. As previously disclosed, we are investing in the next generation of L-asparaginase, used in the production of Oncaspar, and recombinant adenosine deaminase enzyme, used in the production of Adagen. During 2008, we transferred the Oncaspar manufacturing process technology to our contract manufacturing organization and initiated our pivotal clinical trial. However, we also anticipated transferring the Adagen manufacturing process to a contract manufacturing organization during 2008. During the year, we decided to further improve the Adagen process in our internal process development lab. As a result of this decision, our research and development expense for 2008 was lower than we had originally planned and this cost for the Adagen technology transfer will now occur in 2009. We intend to continue to increase efforts to improve the manufacturing processes and pharmaceutical properties of both Oncaspar and Adagen over the next few years. Aggregate research and development expenditures in 2009 (Products segment and corporate) are expected to be in the range of \$80 to \$90 million, approximately 40% of which will be associated with the next-generation Oncaspar and Adagen programs.

#### *Selling and marketing expenses*

Selling and marketing expenses consist primarily of salaries and benefits for our sales and marketing personnel, as well as other commercial expenses and marketing programs to support our sales force. Also included in selling and marketing expenses are the costs associated with our medical affairs function, including a medical science liaison group.

Selling and marketing expenses declined \$1.0 million or approximately 3 percent in 2008 when compared to 2007 due in large part to the consolidation and realignment of our sales forces in late 2007. Also included in selling and marketing expenses are the costs associated with our medical affairs program, offsetting to some degree the savings from the sales force realignment. For the year 2007, selling expenses were \$2.2 million or 6 percent lower than in 2006. Selling and marketing expenses in 2006 had been somewhat higher due to focuses placed at that time on the first-line approval of Oncaspar for acute lymphoblastic leukemia and a repositioning of Abelcet.

#### *Amortization of acquired intangibles*

Amortization expense of approximately \$0.7 million in 2008 and 2007 and \$0.8 million in 2006 was principally related to Abelcet intangible assets.

#### *Restructuring*

During the first quarter of 2007, we announced plans to consolidate our manufacturing operations in our Indianapolis location. This action was taken as part of our continued efforts to streamline operations. Also, during 2007, we combined our previous two specialized sales forces into one. As a result of these two initiatives, we incurred restructuring charges of \$2.1 million during the year ended December 31, 2008 and \$7.7 million in the year ended December 31, 2007. All restructuring charges have been related to the Products segment.

Employee termination costs, consisting of severance and related benefits, amounted to \$1.3 million for the manufacturing restructuring during 2008 and \$2.2 million in 2007. Severance payments related to the manufacturing restructuring commenced during 2008 with the successful transfer of production to the Company's Indianapolis facility and closure of the South Plainfield facility and are expected to continue into 2009. The 2007 sales force realignment resulted in approximately \$0.4 million of employee termination costs, all of which were paid out during 2007. Payments to terminated employees in connection with the manufacturing program have amounted to \$2.3 million. Also, during 2008, prior accruals for certain benefits provided to exiting employees were adjusted downward by \$0.2 million based on actual utilization. The severance liability as of December 31, 2008 was \$1.2 million.

Write-down of manufacturing assets and other costs associated with the manufacturing restructuring in 2008 totaled approximately \$0.8 million. The majority of these costs relate to the acceleration of amortization of leasehold improvements at the South Plainfield facility in 2008 resulting from a reassessment of the estimated time to complete the manufacturing consolidation. During 2007, we also accelerated the depreciation

of certain assets consisting primarily of manufacturing equipment that would not be transferred to the Indianapolis facility and were decommissioned.

Our use of the leased South Plainfield facility has ended, but we continue to incur monthly rental costs related to the facility aggregating \$0.2 million annually which we began charging to general and administrative expense in the fourth quarter of 2008. Prior to the fourth quarter of 2008, while the facility was operational, these costs were included in cost of inventory. We may experience additional restructuring charges associated with the lease or its termination prior to the contractual expiration of the lease in October 2012.

### Royalties Segment

Royalties segment profitability (millions of dollars):

	<b>December 2008</b>	<b>% Change</b>	<b>Year Ended December 2007</b>	<b>% Change</b>	<b>December 2006</b>
Royalty revenue	\$ 59.5	(11)	\$ 67.3	(5)	\$ 70.6
Gain on sale of royalty interest	—	n.m.	88.7	n.m.	—
Segment profit	<u>\$ 59.5</u>	n.m.	<u>\$ 156.0</u>	n.m.	<u>\$ 70.6</u>

n.m. — not meaningful

### *Revenues*

The majority of royalty revenue relates to sales of PEG-INTRON, a PEG-enhanced version of Schering-Plough's alpha interferon product, INTRON A, which is used for the treatment of chronic hepatitis C. Other royalty revenues and certain licensing revenues relate to the application of our technology to third-party products including those under a cross-license agreement with Nektar Therapeutics, Inc. (Nektar) under which we receive a share of the royalties and licensing income received by Nektar. There are currently three third-party products for which Nektar has granted sublicenses to our PEGylation technology and for which we are participating in royalty and licensing income revenues: Hoffmann-La Roche's Pegasys for treatment of hepatitis C, UCB's Cimzia for the treatment of Crohn's disease and OSI and Pfizer's Macugen for the treatment of neovascular (wet) age-related macular degeneration. Our royalties on net sales of Pegasys, which exceeded \$2.0 million in 2008, will end in October 2009.

Total royalty revenue in 2008 was \$59.5 million, down 11 percent from the 2007 level. Royalties associated with PEG-INTRON were approximately 15 percent lower than the prior year. The decline reflects the sale during 2007 of a 25-percent interest in the PEG-INTRON royalties partially offset by improvement in the underlying sales of PEG-INTRON by Schering-Plough. This is consistent with Schering-Plough's public filings wherein they indicate higher sales in international markets, including a favorable impact from foreign exchange which was tempered by lower sales in Japan and the U.S. Royalty growth from Cimzia, Pegasys and Oncaspar in non-U.S. markets also bolstered revenues for the segment in 2008.

Total royalty revenue of \$67.3 million in 2007 was 5 percent lower than the \$70.6 million reported in 2006. The decline was primarily attributable to the fact that we sold a 25-percent interest in royalties payable to it by Schering-Plough Corporation on net sales of PEG-INTRON occurring after June 30, 2007. In our fourth quarter of 2007, because of the one-quarter lag in royalty revenue recognition and the sale of 25 percent of the revenue stream, we reported just 75 percent of the total royalty revenues generated from sales of PEG-INTRON for the quarter ended September 30, 2007, compared to full recognition in all quarters of 2006. Apart from the decrease in percentage of royalties received, there was a modest rise in sales of PEG-INTRON. Increased Pegasys royalties were offset by the effects of competition for Macugen in the U.S.

The gain on the sale of the 25-percent interest in PEG-INTRON royalties, net of related costs, was \$88.7 million. The purchaser of the royalty interest will be obligated to pay an additional \$15.0 million to us in the first quarter of 2012 if it achieves a certain threshold level of royalties on sales of PEG-INTRON occurring

from July 1, 2007 through December 31, 2011. The \$15.0 million contingent gain will be recognized when and if the contingency is removed and collection is assured.

The future revenues to be received from the use of our technology are dependent upon numerous factors outside of our control such as competition and the effectiveness of marketing by our licensees. These factors include the approval of new agents like Hematide, new uses and geographies for PEG-INTRON and Cimzia and changing competition.

*Costs and expenses*

Current royalty revenues do not require any material specific administrative costs. At some point in the future, costs associated with initiation of new out-licensing agreements that could result in our receipt of a royalty stream and, if necessary, costs necessary to maintain the underlying technology may be charged to the Royalties segment.

**Contract Manufacturing Segment**

Contract manufacturing revenues are primarily comprised of revenues from the manufacture of MYOCET and Abelcet for Cephalon for the European market, and the manufacture of an injectable multivitamin, MVI, for Hospira, Inc. (Hospira). We entered into two additional manufacturing agreements in late 2006.

Contract manufacturing segment profitability (millions of dollars):

	<b>December 2008</b>	<b>% Change</b>	<b>Year Ended December 2007</b>	<b>% Change</b>	<b>December 2006</b>
Revenues	\$ 23.6	34	\$ 17.6	25	\$ 14.1
Cost of sales	16.4	23	13.2	12	11.8
Segment profit	<u>\$ 7.2</u>	66	<u>\$ 4.4</u>	91	<u>\$ 2.3</u>

*Revenues*

Contract manufacturing revenue for 2008 was \$6.0 million or 34 percent higher than the revenues generated during 2007. Contract manufacturing revenue in 2008 was favorably affected by \$0.9 million of compensation received in 2008 for certain non-routine services and timing of shipments to our customers (adversely affecting 2007 and having a favorable effect on 2008).

We do not anticipate the level of revenues recorded in 2008 will be achieved in 2009. In addition, our contract with Hospira for the manufacture of MVI is scheduled to terminate effective April 30, 2010. MVI currently contributes more than a third of the segment's revenues. Also, our agreements with Cephalon for the manufacture of MYOCET and Abelcet are scheduled to expire in January 2010 and November 2011, respectively, unless the parties agree to renew.

Contract manufacturing revenue for 2007 rose 25 percent to \$17.6 million over the \$14.1 million recorded in 2006 reflecting, in part, management's efforts to generate additional business in this segment and the reflection of a full year of business under two contracts entered into near the end of 2006. Also, the 2006 revenue amount was adversely affected by a \$1.2 million billing adjustment.

*Cost of sales*

Cost of sales for contract manufacturing for 2008 was \$16.4 million or approximately 69 percent of sales compared to \$13.2 million or approximately 75 percent of sales for 2007. Two events have had a significant favorable influence on these cost comparisons. Cost of sales for 2008, as a percentage of sales, was favorably affected by the above-referenced non-routine services which contributed \$0.9 million of revenues. These services were performed in 2007 but recognition was delayed until all criteria for revenue recognition were met. In addition, cost of sales for 2007 was adversely affected by certain start-up costs related to a new

customer arrangement. Cost of sales as a percentage of sales in 2006 (84 percent) was negatively impacted by the \$1.2 million billing adjustment referred to above which lowered sales with no effect on that year's costs.

### *Non-U.S. Revenue*

We had export sales and royalties recognized on export sales of \$77.1 million, \$73.9 million and \$68.5 million for the years ended December 31, 2008, 2007 and 2006, respectively. Of these amounts, sales in Europe and royalties recognized on sales in Europe, were \$50.3 million, \$45.6 million and \$40.1 million for the years ended December 31, 2008, 2007 and 2006, respectively. Our non-U.S. product sales and royalties are denominated in U.S. dollars and are included in total revenues.

### *Corporate and Other Expenses*

	December 2008	% Change	Year Ended December 2007	% Change	December 2006
	(Millions of dollars)				
Research and development	\$ 43.5	(1)	\$ 44.0	24	\$ 35.6
General and administrative	40.3	20	33.8	(7)	36.3
Acquired in-process research and development	—	—	—	n.m.	11.0
Other income (expense):					
Investment income, net	(6.0)	(45)	(10.9)	(56)	(24.7)
Interest expense	12.7	(27)	17.4	(21)	22.1
Other, net	(1.3)	31	(0.9)	n.m.	(9.0)
	5.4	(1)	5.6	n.m.	(11.6)
Corporate and other expenses	<u>\$ 89.2</u>	7	<u>\$ 83.4</u>	16	<u>\$ 71.3</u>

n.m. — not meaningful

### *Research and development*

Research and development expenses consist primarily of salaries, share-based compensation and benefits; contractor and consulting fees, principally related to clinical and regulatory projects; costs related to research and development partnerships or licenses; drug supplies for clinical and preclinical activities; as well as other research supplies and facilities charges. Research and development expenses related to currently marketed products are excluded from these corporate amounts and are reported in the Products segment. Our research and development expense is considered a corporate expense until a product candidate enters Phase III clinical trials at which time related costs would be chargeable to one of our operating segments. We continue to invest in research and development to build a differentiated oncology business through the continued development of our current portfolio, reinforcing our position as a scientific leader in PEGylation through our Customized Linker Technology platform. Aggregate research and development expenditures in 2009 (Products segment and corporate) are expected to be in the range of \$80 to \$90 million, approximately 60% of which will be associated with advancing our technology.

Corporate research and development for 2008 was relatively unchanged from levels achieved during 2007, declining approximately 1 percent to \$43.5 million. Work continued through 2008 on the Phase I trials initiated during 2007 related to PEG-SN38 and HIF-1 alpha. These Phase I studies must be continued until a Phase II dose is identified which had not occurred as of December 31, 2008. As a result, we were unable to move into Phase II studies for the PEG-SN38 and HIF-1 alpha antagonist programs in 2008, and our corporate research and development expense for 2008 was lower than originally planned. We expect the initiation of Phase II studies and the related cost to be incurred in 2009. We incurred milestone payments aggregating \$6.0 million in 2008 related to an Investigational New Drug (IND) acceptance for Survivin and acceptance of new LNA

compounds licensed from Santaris Pharma A/S (Santaris). Spending on contracted services related to the programs during 2008 was somewhat less than that which was experienced during 2007 as 2007 included various start-up costs. Partially offsetting the decline in contracted services during 2008 was a rise in compensation expense attributable in part to the continuing effects of share-based compensation accounting rules effective in 2005. The accounting for stock options and nonvested share awards became a charge to expense when the new rules were adopted and, for a period of approximately four years after the adoption, we have experienced incremental layering of amortization of post-adoption grants.

For the year 2007, research and development spending was \$44.0 million as compared to \$35.6 million in 2006. The increase was primarily due to spending in 2007 on the new programs initiated during 2006. We filed an IND application and opened two Phase I trials for PEG-SN38. Also, we opened two Phase I trials in the HIF-1 alpha antagonist subsequent to the IND filing in the quarter ended December 31, 2006. The HIF-1 alpha IND filing, approved by the FDA in January 2007, triggered a \$5.0 million license milestone payment to Santaris. This was recorded in research and development expense in 2006. In the fourth quarter of 2007, we accepted two of the additional six oncology compounds licensed from Santaris which prompted a \$2.0 million milestone payment. In addition, compensation expense was affected by new hires and by the July 1, 2005 adoption of share-based compensation rules that required a charge to expense for stock options and nonvested share awards. This affected 2007-to-2006 comparisons due to the successive layering in of amortization of post-adoption grants.

#### *General and administrative*

General and administrative expenses consist primarily of outside professional services for accounting, audit, tax, legal, and financing activities; salaries and benefits for support functions; patent filing fees and facilities costs.

General and administrative expenses rose \$6.5 million or approximately 20 percent in 2008 compared to 2007. The majority of the increase, approximately \$5.0 million, was related to our evaluation of strategic alternatives and improving our capital structure. These costs, which included legal, accounting and professional fees, pertained in part to our study of possible alternative directions for the Company including a spin-off our biotechnology activities, selling the specialty pharmaceuticals business, or selling one or more of our marketed products and our Indianapolis manufacturing facility. For various reasons, none of these initiatives were consummated and on December 1, 2008, we halted our current pursuit of these initiatives. We also undertook a solicitation of consent from holders of our 4% convertible notes to amend the notes indenture and we commenced a tender offer for our 4% notes in December 2008. Other costs contributing to the increase in general and administrative expenses included: securing intellectual property rights for certain of our research and development efforts and incremental share-based compensation to employees. For a period of three to four years after the July 2005 adoption of new rules related to share-based compensation, we have experienced upward pressure on share-based compensation expense as amortization of additional grants has been layered into the computations.

General and administrative expenses for the year ended December 31, 2007 of \$33.8 million were lower by 7 percent from 2006 levels of \$36.3 million. General and administrative expenses for the year ended December 31, 2006 included \$7.0 million in legal costs incurred in connection with securing the supply of the raw material used to produce Oncaspar. The absence of this expense in the succeeding year largely explains the decline in general and administrative expense from 2006 to 2007 of \$2.5 million. Offsetting this decline, in part, was the effect of the July 2005 adoption of new share-based compensation accounting rules.

#### *Acquired in-process research and development*

Acquired in-process research and development for the year ended December 31, 2006 was comprised of payments totaling \$11.0 million to Santaris for rights to a total of eight RNA antagonists based on LNA technology. Because this technology was in the developmental stage, the payment was immediately charged to expense.

#### *Other income (expense)*

Other income (expense) for the three years ended December 31, 2008, 2007 and 2006 was: expense of \$5.4 million, expense of \$5.6 million and income of \$11.6 million, respectively. The refinancing of a significant portion of our long-term debt in 2006 and repurchase and retirement of our remaining 4.5% notes payable in 2008 and 2007 affected the year-to-year comparisons in a number of ways (refer to Liquidity and Capital Resources below).

Net investment income in 2008 was lower than in 2007 by approximately \$4.9 million due to a reduction in the amount of investment holdings during the year combined with lower interest rates. We utilized \$72.0 million of investments (held in restricted investments and cash as of December 31, 2007) to retire our remaining 4.5% notes payable in July 2008, the residual being returned to general corporate funds. In addition, we recognized a non-cash \$645,000 impairment write-down in 2008 of one auction rate security when the reduction in fair value was deemed to be other than temporary. Net investment income decreased by \$13.8 million to \$10.9 million for 2007 from \$24.7 million for 2006 due principally to the sale in 2006 of our remaining 1,023,302 shares of Nektar Therapeutics, Inc. common stock which resulted in a net gain of \$13.8 million that year.

Interest expense, which includes amortization of deferred offering costs, has declined over the three-year period from 2006 through 2008, from \$22.1 million in 2006 to \$17.4 million in 2007 to \$12.7 million in 2008. This was due principally to the refinancing and repayment of our 4.5% notes payable throughout this period. The balance of notes payable at the beginning of 2006 was \$394.0 million with an interest rate of 4.5%. As of December 31, 2008, we had \$270.5 million of principal amount of notes outstanding carrying a 4% rate of interest. Aggregate repurchases and retirements of our outstanding notes during 2008 and 2007 were \$74.8 million and \$49.7 million, respectively. During 2006, \$271.4 million principal amount of the 4.5% notes was repurchased using the proceeds of our May 2006 issuance of \$275.0 million 4.0% notes. The refinancing resulted in the write-off of approximately \$2.5 million of deferred offering costs in 2006, contributing to higher-than-normal interest expense that year.

Significant portions of other income relate to gains realized on repurchase of notes payable. In 2008, we repurchased \$4.5 million principal amount of our 4% notes at a discount to par yielding a gain of approximately \$1.7 million. We also repurchased a portion of our 4.5% notes early in 2008 at a gain of \$0.4 million. Losses related to asset disposals and foreign exchange partially offset the 2008 gains on repurchase of notes payable. In 2007, repurchase of 4.5% notes generated a gain of \$0.5 million and in 2006, we realized a gain of \$9.2 million related to repurchase of \$271.4 million principal amount of the 4.5% notes.

#### *Income Taxes*

Income tax expense is primarily comprised of certain state and Canadian taxes. No federal income tax expense is incurred in relation to normal operating results due either to current period operating losses or the utilization of deferred tax assets to offset taxes that would otherwise accrue to operating income. The \$1.9 million tax expense recorded in 2007 included a federal income tax provision for alternative minimum tax related to the gain on sale of a royalty interest recognized that year.

## Liquidity and Capital Resources

Cash reserves, including cash, cash equivalents, short-term investments and marketable securities, totaled \$206.9 million as of December 31, 2008. At December 31, 2007, cash reserves also included restricted investments and cash of \$73.6 million and totaled \$258.2 million. The primary reason for the decline in cash reserves during 2008 was the retirement of \$76.9 million of our convertible notes offset, in part, by cash provided by operating activities. We invest our excess cash primarily in investment-grade corporate debt securities. As of December 31, 2007, aggregate cash reserves rose to \$258.2 million from \$240.6 million at December 31, 2006. Net cash received on the sale of a 25-percent interest in PEG-INTRON royalties of \$88.7 million, represented the largest single cash inflow and offset expenditures to redeem 4.5% notes payable (\$49.7 million), purchase property and equipment (\$17.6 million) and purchase Oncaspar supply rights (\$17.5 million). The remaining increase in 2007 cash reserves arose principally from operations.

Operating activities provided cash of \$30.5 million in 2008, a reduction of \$69.9 million compared to the \$100.4 million of operating cash flows in 2007. The \$88.7 million gain in 2007 from the monetization of a portion of PEG-INTRON royalties represented the primary difference between the two years. Changes in various balance sheet accounts comprised the partially offsetting difference (a source of cash in 2008 of approximately \$5.9 million and a use of cash in 2007 of approximately \$14.1 million). Cash provided by operating activities in 2007 of \$100.4 million exceeded that in 2006 by \$57.1 million. This was due primarily to the rise in operating income. The largest single factor in this increase from year to year was the \$88.7 million net gain on the sale of future PEG-INTRON royalties. Offsetting this cash inflow, in part, was the comparative change in operating assets and liabilities year over year aggregating to \$25.4 million.

Cash was provided by investing activities in 2008 in the amount of \$82.8 million as marketable securities, including \$55.0 million of restricted investments, matured or were liquidated and \$7.9 million was invested in plant and equipment. The proceeds of the restricted investments were used to repurchase our 4.5% notes payable. Cash used in investing activities in 2007 of \$32.6 million was lower than the \$100.0 million expended in 2006 due primarily to the fact that, in 2006, we made net incremental investments in marketable and equity securities of approximately \$44.3 million. We also had greater investments in 2006 in product rights and in-process research and development (\$17.5 million in 2007 versus \$46.0 million in 2006). There was an offsetting increase in investments in property and equipment in 2007 of \$7.9 million when compared to the prior year.

Financing activities in 2008, 2007 and 2006 related almost entirely to the repurchase and refinancing of our long-term debt as described below. The repurchase of a portion of outstanding notes payable constituted a use of cash in 2008 of \$74.8 million and in 2007 of \$49.7 million. The net result in 2006 of issuing the 4% notes and partial repurchase of the 4.5% notes was a source of cash of \$5.1 million.

In 2008, we repurchased \$4.5 million principal amount of our 4% notes for \$2.8 million. As a result, as of December 31, 2008, we had outstanding \$270.5 million of 4% convertible senior notes payable. Interest is payable on June 1 and December 1. Accrued interest was \$0.9 million as of December 31, 2008. As a result of a tender offer to repurchase a portion of our outstanding 4% notes, which commenced in December 2008, \$2.95 million principal amount of the 4% notes were tendered. In January 2009, we accepted and repurchased the \$2.95 million principal amount of notes at a purchase price of \$740 per \$1,000 of principal amount. From time to time, we may repurchase our 4% notes in the open market, in privately negotiated transactions or otherwise.

During 2007, we repurchased \$50.3 million principal amount of 4.5% notes for \$49.7 million. The second-quarter 2006 issuance of the 4% notes generated \$275.0 million of gross financing cash inflows (\$225.0 million in May and \$50.0 million in June). We incurred \$7.7 million of costs in connection with the note issuances including legal, accounting and underwriting fees. The net proceeds of the 4% note issuance were used to repurchase \$271.4 million face value (\$133.8 million in May and \$137.6 million in July) of 4.5% notes outstanding at a purchase price of \$965 for each \$1,000 principal amount plus accrued interest. The combined purchase price was \$262.1 million and accrued interest amounted to \$2.5 million. For a more detailed description of the terms of our convertible subordinated notes see "Contractual Obligations" below.

Our current sources of liquidity are our cash reserves; interest earned on such cash reserves; sales of Oncaspar, DepoCyt, Abelcet and Adagen; royalties earned which are primarily related to sales of PEG-INTRON; and contract manufacturing revenue. Based upon our current planned research and development

activities and related costs and our current sources of liquidity, we anticipate our current cash reserves and expected cash flow from operations will be sufficient to meet our capital and operational requirements for the near future. While we believe that our current sources of liquidity will be adequate to satisfy our capital and operational needs for the near future, we may enter into agreements with collaborators with respect to the development and commercialization of products that could increase our cash requirement or seek additional financing to fund future operations and potential acquisitions. We cannot assure you, however, that we will be able to obtain additional funds on acceptable terms, if at all. (See Risk Factors — “We will need to obtain additional financing to meet our future capital needs and our significant debt level may adversely affect our ability to do so. Failure to do so could materially and adversely affect our business, financial condition and operations.”)

### **Off-Balance Sheet Arrangements**

As part of our ongoing business, we do not participate in transactions that generate relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities (SPE), which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow limited purposes. As of December 31, 2008, we are not involved in any off-balance sheet SPE transactions.

Our 4% notes are convertible, at the option of the holder, into shares of our common stock at a conversion price of \$9.55 per share and pose a reasonable likelihood of potential significant dilution. At December 31, 2008, the maximum potential dilutive effect of conversion of the 4% notes is 28.3 million shares. The notes are discussed in greater detail in Liquidity and Capital Resources above and Contractual Obligations below.

In addition, stock options to purchase 8.4 million shares of our common stock at a weighted average exercise price of \$11.30 per share and 1.8 million restricted stock units were outstanding at December 31, 2008, that represent additional potential dilution.

### **Contractual Obligations**

Our major outstanding contractual obligations relate to our notes payable, including interest, operating lease obligations, inventory purchase obligations and our license agreements with collaborative partners.

As of December 31, 2008, we had \$270.5 million of 4% convertible senior unsecured notes outstanding. These notes mature on June 1, 2013 unless earlier redeemed, repurchased or converted. They may be converted at the option of the holders into our common stock at an initial conversion price of \$9.55 per share. The 4% notes rank equal to all future senior unsecured debt.

At any time on or after June 1, 2009, if the closing price of our common stock for at least 20 trading days in the 30 consecutive trading day period ending on the date one day prior to the date of a notice of redemption is greater than 140 percent of the applicable conversion price on the date of such notice, we, at our option, may redeem the 4% notes in whole or in part, at a redemption price in cash equal to 100 percent of the principal amount of the 4% notes to be redeemed, plus accrued interest, if any, to the redemption date. The 4% notes are not redeemable prior to June 1, 2009. Upon occurrence of a “fundamental change”, as defined in the indenture governing the notes, holders of the notes may require us to redeem the notes at a price equal to 100 percent of the principal amount plus accrued and unpaid interest or, in certain cases, to convert the notes at an increased conversion rate based on the price paid per share of our common stock in the transaction constituting the fundamental change.

In August 2008, we obtained the consent of holders of our 4% convertible senior notes due 2013 to amend the indenture by:

- (i) eliminating any exceptions to circumstances under which a sale, transfer or lease by us of all or substantially all of our properties or assets to another person would constitute a fundamental change (as defined in the indenture);
- (ii) providing that we may not sell, transfer, lease or otherwise dispose of all or substantially all of our properties or assets unless: (a) an amount in cash sufficient to satisfy its obligations under the indenture to repurchase the notes in the event of a fundamental change is designated by us for such

purpose and held in a segregated account for 60 business days after the consummation of the sale, transfer, lease or disposition transaction and (b) no default or event of default under the indenture will have occurred and be continuing;

- (iii) providing that upon a sale, transfer, lease or other disposition of all or substantially all of our properties or assets that is a fundamental change, the transferee will not be required to assume our obligations under the indenture and the notes; and
- (iv) increasing the number of additional shares issuable per \$1,000 initial principal amount of notes upon conversion of the notes in connection with a fundamental change.

We lease three facilities in New Jersey. Future minimum lease payments and commitments for operating leases total \$22.6 million at December 31, 2008.

Under our exclusive license for the right to sell, market and distribute Pacira's DepoCyt product, we are required to maintain sales levels of DepoCyt equal to \$5.0 million for each calendar year. Pacira is also entitled to a milestone payment of \$5.0 million if our sales of the product exceed a \$17.5 million annualized run rate for four consecutive quarters and an additional milestone payment of \$5.0 million if our sales exceed an annualized run rate of \$25.0 million for four consecutive quarters. We are also responsible for a milestone payment of \$5.0 million if the product receives approval of an indication for all neoplastic meningitis. To date, no milestone payments defined under the agreement have been achieved by us.

In December 2006, we entered into supply and license agreements with Ovation. Pursuant to the agreements, Ovation committed to supply and we committed to purchase specified quantities of the active ingredient used in the production of Oncaspar during calendar years 2008 and 2009. Additionally, Ovation granted to us a non-exclusive, fully-paid, perpetual, irrevocable, worldwide license to the cell line from which such ingredient is derived. We agreed to effectuate, at our cost, a technology transfer of the cell line and manufacturing capabilities for the ingredient from Ovation to us no later than December 31, 2009. We further agreed to supply specified quantities of the ingredient to Ovation, at Ovation's option, in calendar years 2010-2012. If we fail to supply the specified quantities in 2010-2012, we will be required to pay damages to Ovation in the amounts of \$5.0 million in 2010, \$10.0 million in 2011 and \$15.0 million in 2012.

In July 2006, we entered into a license and collaboration agreement with Santaris for up to eight RNA antagonists. We obtained rights worldwide, other than in Europe, to develop and commercialize RNA antagonists directed against the HIF-1 alpha and Survivin gene targets, as well as RNA antagonists directed against six additional gene targets selected by us. We will be responsible for making additional payments upon the successful completion of certain compound synthesis and selection, clinical development and regulatory milestones. In 2008, we made \$6.0 million in milestone payments. Santaris is also eligible to receive royalties from any future product sales of products based on the licensed antagonists. Santaris retains the right to develop and commercialize products developed under the collaboration in Europe.

Under our exclusive license with Sanofi-Aventis for marketing and distribution of Oncaspar in the U.S. and Canada, we were obligated to pay \$5.0 million if net sales exceed \$30.0 million for two consecutive years. As of June 30, 2008, achievement of the two-year net sales threshold was considered probable, and the \$5.0 million liability was recorded. The payment was due and made in January 2009.

Contractual obligations represent future cash commitments and liabilities under agreements with third parties, and exclude contingent liabilities for which we cannot reasonably predict future payment.

The following chart represents our contractual cash obligations aggregated by type as of December 31, 2008 (in millions):

Contractual Obligations and Commercial Commitments <sup>(1)</sup>	Total	Payments due by period			
		Less Than 1 Year	2-3 Years	4-5 Years	More Than 5 Years
Notes payable <sup>(2)</sup>	\$ 270.5	\$ 2.9	\$ —	\$ 267.6	\$ —
Operating lease obligations	22.6	2.3	4.5	4.3	11.5
Inventory purchase obligations	5.7	5.4	0.3	—	—
Interest due on notes payable	48.2	10.7	21.4	16.1	—
<b>Totals</b>	<b>\$ 347.0</b>	<b>\$ 21.3</b>	<b>\$ 26.2</b>	<b>\$ 288.0</b>	<b>\$ 11.5</b>

<sup>(1)</sup> The table does not include potential milestone payments of \$259.2 million, primarily comprised of; \$243.0 million to Santaris that are only payable upon successful development of all eight RNA antagonists selected by us and \$10.0 million to Pacira, pending successful achievement of various regulatory and sales milestones.

<sup>(2)</sup> Our 4% convertible notes are payable on June 1, 2013.

### Critical Accounting Policies and Estimates

A critical accounting policy is one that is both important to the portrayal of a company's financial condition and results of operations and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain.

Our consolidated financial statements are presented in accordance with accounting principles that are generally accepted in the U.S. All professional accounting standards effective as of December 31, 2008 have been taken into consideration in preparing the consolidated financial statements. The preparation of the consolidated financial statements requires estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures. Some of those estimates are subjective and complex, and, consequently, actual results could differ from those estimates. The following accounting policies and estimates have been highlighted as significant because changes to certain judgments and assumptions inherent in these policies could affect our consolidated financial statements.

We base our estimates, to the extent possible, on historical experience. Historical information is modified as appropriate based on current business factors and various assumptions that we believe are necessary to form a basis for making judgments about the carrying value of assets and liabilities. We evaluate our estimates on an ongoing basis and make changes when necessary. Actual results could differ from our estimates.

### Revenues

Revenues from product sales are recognized when title passes to the customer, generally at the time product is received. For product sales, we record a provision at the time of shipment for estimated future credits, chargebacks, sales discounts, rebates and returns. These sales provision accruals, except for rebates which are recorded as a liability, are presented as a reduction of the accounts receivable balances.

We recognize revenues for Abelcet at the time of sale to the wholesaler. Sales of Oncaspar and DepoCyt are recorded when product shipped by our third-party distributor to the end-user is received. Adagen is sold directly to a specialty distributor that then sells the product to end-users. We recognize revenue for Adagen upon sale to the specialty distributor.

We provide chargeback payments to the wholesalers based on their sales to members of buying groups at prices determined under a contract between ourselves and the member. Administrative fees are paid to buying groups based on the total amount of purchases by their members. We estimate the amount of the chargeback that will be paid using (a) distribution channel information obtained from certain of our wholesalers which allows us to determine the amount and expiry of inventory in the distribution channel and (b) historical trends,

adjusted for current conditions. The settlement of the chargebacks generally occurs within three months after the sale to the wholesaler. We regularly analyze the historical chargeback trends and make adjustments to recorded reserves for changes in trends.

In addition, state agencies that administer various programs, such as the U.S. Medicaid programs, receive rebates. Medicaid rebates and administrative fees are recorded as a liability and a reduction of gross sales when we record the sale of the product. In determining the appropriate accrual amount, we use (a) distribution channel information obtained from certain of our wholesalers which allows us to determine the amount and expiry of inventory in the distribution channel, (b) our historical rebate and administrative fee payments by product as a percentage of our historical sales, and (c) any significant changes in sales trends. Current Medicaid rebate laws and interpretations, and the percentage of our products that are sold to Medicaid patients are also evaluated. Factors that complicate the rebate calculations are the timing of the average manufacturer pricing computation, the lag time between sale and payment of a rebate, which can range up to nine months, and the level of reimbursement by state agencies.

The following is a summary of gross-to-net sales reductions that are accrued on our consolidated balance sheets as of December 31, 2008 and 2007 (in thousands):

	Chargebacks <sup>(1)</sup>	Cash Discounts <sup>(1)</sup>	Other (Including Returns)	Medicaid Rebates <sup>(2)</sup>	Medicaid Administrative Fees <sup>(2)</sup>	Total
Balance at December 31, 2006	\$ 3,388	\$ 168	\$ 1,767	\$ 1,335	\$ 205	\$ 6,863
Provision related to sales made in current period <sup>(3)</sup>	22,980	1,353	4,708	3,164	541	32,746
Provision related to sales made in prior period	—	—	—	—	—	—
Returns and credits <sup>(4)</sup>	(23,790)	(1,362)	(4,429)	(3,117)	(559)	(33,257)
Balance at December 31, 2007	2,578	159	2,046	1,382	187	6,352
Provision related to sales made in current period <sup>(3)</sup>	22,578	1,700	5,907	3,123	395	33,703
Provision related to sales made in prior period	—	—	—	—	—	—
Returns and credits <sup>(4)</sup>	(22,688)	(1,667)	(5,594)	(2,340)	(545)	(32,834)
Balance at December 31, 2008	<u>\$ 2,468</u>	<u>\$ 192</u>	<u>\$ 2,359</u>	<u>\$ 2,165</u>	<u>\$ 37</u>	<u>\$ 7,221</u>

<sup>(1)</sup> Reported as a reduction of accounts receivable.

<sup>(2)</sup> Reported as an accrued liability.

<sup>(3)</sup> Approximately 83 percent and 87 percent relates to Abelcet in 2008 and 2007, respectively.

<sup>(4)</sup> Relates to sales made in the current period.

Royalties under our license agreements with third parties are recognized when reasonably determinable and earned through the sale of the product by the licensee net of future credits, chargebacks, sales discount rebates and refunds and collection is reasonably assured. Notification from the third-party licensee of the royalties earned under the license agreement is the basis for royalty revenue recognition. This information is generally received from the licensees in the quarter subsequent to the period in which the sales occur.

Revenues from contract manufacturing are recognized when title passes to the customer, generally at the time of shipment. At the request of the customer, certain contract manufacturing arrangements involve the transfer of title of the finished product to the customer prior to shipment. The product in question is

manufactured to the unique specifications of the customer and cannot be used to fill other orders. If all necessary conditions are met, including: the product is complete and ready for shipment, the risks of ownership have passed to the customer and the customer pays for storage of the product at our facility, we will recognize revenue upon transfer of title.

Non-refundable milestone payments that represent the completion of a separate earnings process are recognized as revenue when earned, upon the occurrence of contract-specified events. Non-refundable payments received upon entering into license and other collaborative agreements where we have continuing involvement are recorded as deferred revenue and recognized ratably over the estimated service period.

### **Income Taxes**

Under the asset and liability method of SFAS No. 109, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance on net deferred tax assets is provided for when it is more likely than not some portion or all of the deferred tax assets will be not realized. As of December 31, 2008, we believe, based on future projections, that it is more likely than not that our net deferred tax assets, including our net operating losses from operating activities and stock option exercises, will not be realized. We recognize the benefit of an uncertain tax position that we have taken or expect to take on the income tax returns we file if it is more likely than not we will be able to sustain our position.

### **Long-Lived Asset Impairment Analysis**

Long-lived assets, including amortizable intangible assets are tested for impairment when impairment indicators are present. Impairment indicators are events or circumstances that may be indicative of possible impairment such as a significant adverse change in legal factors or in business climate, a current period operating loss combined with a history of operating losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group.

Testing for the recoverability of amortizable intangible assets is performed initially by comparing the carrying amount of the asset group to the future undiscounted net cash flows to be generated by the assets. If the undiscounted net cash flow stream exceeds the carrying amount, no further analysis is required. However, if this test shows a negative relationship, the fair value of the assets within the asset group must be determined and we would record an impairment charge for any excess of the carrying amount over the fair value. These evaluations involve amounts and forecasts that are based on management's best estimates and judgment. Actual results may differ from these estimates.

### **Share-Based Payments**

We account for share-based compensation in accordance with SFAS No. 123R, "Share-Based Payment." SFAS No. 123R establishes standards for the accounting for transactions in which an entity exchanges its equity instruments for goods or services and requires that the compensation cost relating to share-based payment transactions be recognized in the financial statements, measured by the fair value of the equity or liability instruments issued, adjusted for estimated forfeitures. We have elected the modified prospective transition method which requires that compensation costs be recorded, as earned, for all unvested stock options and restricted stock awards outstanding at June 30, 2005.

The impact that share-based payment awards will have on our results of operations is a function of the number of shares awarded, vesting and the trading price of our stock at date of grant, combined with the application of the Black-Scholes valuation model. Fair value of share-based payments is determined using the Black-Scholes valuation model which employs weighted average assumptions for expected volatility of the Company's stock, expected term until exercise of the options, the risk free interest rate, and dividends, if any. Expected volatility is based on historical Enzon stock price information.

### **Recently Issued Accounting Standards**

Effective January 1, 2008, we adopted the provisions related to financial assets and liabilities of Statement of Financial Accounting Standards No. 157, "Fair Value Measurements", (SFAS No. 157), as amended. SFAS No. 157 provides guidance on the use of fair value in accounting and disclosure for assets and liabilities when such accounting and disclosure is called for by other accounting literature. As amended by Financial Accounting Standards Board (FASB) Staff Position (FSP) 157-2, the applicability of SFAS No. 157 for most nonfinancial assets and nonfinancial liabilities has been delayed to 2009 for calendar-year companies. We currently have no financial assets or liabilities for which we recognize in earnings periodic gains or losses resulting from fair value fluctuations. We have no significant nonfinancial assets or liabilities that we expect will be affected in 2009 when SFAS No. 157 becomes fully effective.

In December 2007, the FASB issued two statements that would apply prospectively to potential, business combinations for which the acquisition date is on or after January 1, 2009. Early application is not permitted. These pronouncements would be adopted at such time as we undertake a business combination and will have no impact on our current financial statements. SFAS No. 141R, "Business Combinations", retains the fundamental requirements of purchase accounting but requires, among other things, the recognition and measurement of any noncontrolling interest and certain previously unrecognized intangible assets such as in-process research and development. It also calls for the recognition of most acquisition costs as expense rather than part of the total acquisition cost and the recognition of a gain in the event of a bargain purchase rather than negative goodwill. SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements", establishes accounting and reporting standards for the noncontrolling (minority) interest in a subsidiary and for the deconsolidation of a subsidiary.

In December 2007, the Emerging Issues Task Force (EITF) issued EITF 07-1, "Accounting for Collaborative Agreements". Effective beginning in 2009, the consensus prohibits participants in a collaborative agreement from applying the equity method of accounting to activities performed outside a separate legal entity and requires gross or net presentation of revenues and expenses by the respective parties depending upon their roles in the collaboration. We are not presently a participant in such collaborative agreements. Accordingly, this consensus will have no impact on our current financial statements.

In June 2008, the EITF issued EITF 07-5, "Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock". The issue addresses the determination of whether an instrument (or an embedded feature) is indexed to an entity's own stock and establishes a two-step approach with which to make the determination. Under current U.S. GAAP, the conversion options embedded in our convertible debt are considered to be indexed to our stock and, as a result, we are not required to bifurcate the option from the note payable and mark the option to market each reporting period. We are in the process of evaluating the provisions of EITF 07-5, which would take effect prospectively in the first quarter of 2009, but at this time do not believe there will be a material effect on our financial position or results of operations. There would be no effect on our cash flows.

### **Forward-Looking Information and Factors That May Affect Future Results**

There are forward-looking statements contained herein which can be identified by the use of forward-looking terminology such as the words "believes," "expects," "may," "will," "should," "potential," "anticipates," "plans" or "intends" and similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be materially different from the future results, events or developments indicated in such forward-looking statements. Such factors include, but are not limited to:

- The risk that we will not achieve success in our research and development efforts, including clinical trials conducted by us or our collaborative partners.
- The risk that we will experience operating losses for the next several years.
- The risk that there will be a decline in sales of one or more of our marketed products or products sold by others from which we derive royalty revenues. Such sales declines could result from increased competition, loss of patent protection, pricing, supply shortages and/or regulatory constraints.

- The risk that we will be unable to obtain critical compounds used in the manufacture of our products at economically feasible prices or at all, or one of our key suppliers will experience manufacturing problems or delays.
- Decisions by regulatory authorities regarding whether and when to approve our regulatory applications as well as their decisions regarding labeling and other matters that could affect the commercial potential of our products or developmental products.
- The risk that we will fail to obtain adequate financing to meet our future capital and financing needs.
- The risk that key personnel will leave the Company.

A more detailed discussion is contained in “Risk Factors” in Item 1A, Part I of this report. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. No assurance can be given that the future results covered by the forward-looking statements will be achieved. All information contained herein is as of the date of this report and we do not intend to update this information.

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

Our holdings of financial instruments are comprised of debt securities and time deposits. All such instruments are classified as securities available-for-sale. Apart from custodial accounts related to the Executive Deferred Compensation Plan, we do not invest in portfolio equity securities. We do not invest in commodities or use financial derivatives for trading purposes. Our debt security portfolio represents funds held temporarily pending use in our business and operations. We manage these funds accordingly. We seek reasonable assuredness of the safety of principal and market liquidity by investing in rated fixed income securities while at the same time seeking to achieve a favorable rate of return. Our market risk exposure consists principally of exposure to changes in interest rates. Our holdings also are exposed to the risks of changes in the credit quality of issuers the majority of which are rated A1 or better. We typically invest the majority of our investments in the shorter-end of the maturity spectrum.

The table below presents the amortized cost, fair value and related weighted average interest rates by year of maturity for our available-for-sale securities as of December 31, 2008 excluding primarily those related to our Executive Deferred Compensation Plan (in thousands).

	2009	2010	2011	Total	Fair Value
Fixed Rate	\$ 62,508	\$ 47,180	\$ 11,804	\$ 121,492	\$ 119,822
Average Interest Rate	5.90%	5.77%	4.91%	5.75%	
Variable Rate	3,555	—	—	3,555	3,417
Average Interest Rate	3.74%	—	—	3.74%	
	<u>\$ 66,063</u>	<u>\$ 47,180</u>	<u>\$ 11,804</u>	<u>\$ 125,048</u>	<u>\$ 123,239</u>

Our outstanding convertible notes have fixed interest rates. Accordingly the fair values of the respective issuances will fluctuate as market rates of interest move up or down. Fair values are also affected by changes in the price of our common stock.

Our 4% convertible senior unsecured notes in the principal amount of \$270.5 million at December 31, 2008 are due June 1, 2013 and have a fair value of \$201.0 million at December 31, 2008.

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

Financial statements and notes thereto and the supplemental financial statement schedule appear on pages F-1 to F-36 of this Annual Report on Form 10-K.

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

Not Applicable.

## **Item 9A. Controls and Procedures**

### **(a) Evaluation of Disclosure Controls and Procedures**

Our management, under the direction of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, (the Exchange Act)) as of December 31, 2008. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2008.

### **(b) Changes in Internal Controls**

There were no changes in our internal controls over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, during the three-month period ended December 31, 2008 covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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

It is the responsibility of the management of Enzon Pharmaceuticals, Inc. and subsidiaries to establish and maintain effective internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Internal control over financial reporting is designed to provide reasonable assurance to Enzon's management and board of directors regarding the preparation of reliable consolidated financial statements for external purposes in accordance with generally accepted accounting principles.

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management has performed an assessment of the effectiveness of Enzon's internal control over financial reporting as of December 31, 2008 based upon criteria set forth in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management has concluded that our internal control over financial reporting was effective as of December 31, 2008.

Our independent auditor, KPMG LLP, an independent registered public accounting firm, has issued an auditors' report on the effectiveness of internal control over financial reporting as of December 31, 2008. The auditor's report follows.

/s/ Jeffrey H. Buchalter  
Jeffrey H. Buchalter  
Chairman, President, and  
Chief Executive Officer  
(Principal Executive Officer)

/s/ Craig A. Tooman  
Craig A. Tooman  
Executive Vice President, Finance and  
Chief Financial Officer  
(Principal Financial Officer)

March 6, 2009

March 6, 2009

**(d) Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders  
Enzon Pharmaceuticals, Inc.:

We have audited Enzon Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Enzon Pharmaceuticals, Inc.'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 the Company'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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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, Enzon Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for each of the years in the three-year period ended December 31, 2008, and our report dated March 6, 2009 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Short Hills, New Jersey  
March 6, 2009

**Item 9B. Other Information**

None.

**PART III**

The information required by Item 10 — Directors, Executive Officers and Corporate Governance; Item 11 — Executive Compensation; Item 12 — Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, Item 13 — Certain Relationships and Related Transactions, and Director Independence and Item 14 — Principal Accountant Fees and Services is incorporated into Part III of this Annual Report on Form 10-K by reference to the Proxy Statement for our 2009 Annual Meeting of Stockholders.

**PART IV****Item 15. Exhibits and Financial Statement Schedules.**

(a)(1) and (2). The response to this portion of Item 15 is submitted as a separate section of this report commencing on page F-1.

(a)(3) and (c). Exhibits (numbered in accordance with Item 601 of Regulation S-K).

<b>Exhibit Number</b>	<b>Description</b>	<b>Reference No.</b>
3(i)	Amended and Restated Certificate of Incorporation	(1)
3(ii)	Amended and Restated Bylaws	(2)
4.1	Rights Agreement dated May 17, 2002 between the Company and Continental Stock Transfer & Trust Company, as rights agent	(3)
4.2	First Amendment to the Rights Agreement, dated as of February 19, 2003 between the Company and Continental Stock Transfer & Trust Company, as rights agent	(4)
4.3	Second Amendment to the Rights Agreement dated as of January 7, 2008 between the Company and Continental Stock Transfer and Trust Company, as rights agent.	(5)
4.4	Indenture, dated May 23, 2006, between Enzon Pharmaceuticals, Inc. and Wilmington Trust Company	(6)
4.5	First Supplemental Indenture, dated August 25, 2008, between Enzon Pharmaceuticals, Inc. and Wilmington Trust Company	(7)
10.1	Lease — 300-C Corporate Court, South Plainfield, New Jersey	(8)
10.2	Lease dated April 1, 1995 regarding 20 Kingsbridge Road, Piscataway, New Jersey	(9)
10.3	First Amendment to Lease regarding 20 Kingsbridge Road, Piscataway, New Jersey, dated as of November 13, 2001	(10)
10.4	Lease 300A-B Corporate Court, South Plainfield, New Jersey	(11)
10.5	Modification of Lease Dated May 14, 2003 — 300-C Corporate Court, South Plainfield, New Jersey	(12)
10.6	Lease — 685 Route 202/206, Bridgewater, New Jersey	(13)
10.7	First Amendment of Lease — 685 Route 202/206, Bridgewater, New Jersey	(14)
10.8	Second Amendment to Lease — 685 Route 202/206, Bridgewater, New Jersey	(14)
10.9	Third Amendment to Lease — 685 Route 202/206, Bridgewater, New Jersey	(14)
10.10	2001 Incentive Stock Plan, as amended and restated, of Enzon Pharmaceuticals, Inc.**	(1)
10.11	Development, License and Supply Agreement between the Company and Schering Corporation; dated November 14, 1990, as amended*	(15)
10.12	Executive Deferred Compensation Plan (2008 Restatement)**	(16)
10.13	Form of Non-Qualified Stock Option Agreement between the Company and Craig A. Tooman**	(17)

Exhibit Number	Description	Reference No.
10.14	Amended and Restated Severance Agreement with Paul S. Davit dated May 7, 2004**	(17)
10.15	Amended and Restated Severance Agreement with Ralph del Campo dated May 7, 2004**	(17)
10.16	2007 Outside Director Compensation Plan, as amended**	(18)
10.17	Employment Agreement with Ivan D. Horak, M.D. dated September 2, 2005, along with a form of Stock Option Award Agreement and Restricted Stock Unit Award Agreement between the Company and Dr. Horak executed as of September 2, 2005*,**	(19)
10.18	Form of Non-Qualified Stock Option Agreement for Executive Officers**	(20)
10.19	Form of Restricted Stock Award Agreement for Executive Officers**	(20)
10.20	Form of Restricted Stock Unit Award Agreement for Executive Officers**	(21)
10.21	Form of Restricted Stock Unit Award Agreement for Independent Directors**	(19)
10.22	Form of Stock Option Award Agreement for Independent Directors 1987 Non-Qualified Stock Option Plan**	(19)
10.23	Form of Stock Option Award Agreement for Independent Directors 2001 Incentive Stock Plan**	(19)
10.24	Amended and Restated Employment Agreement with Craig A. Tooman dated June 18, 2008	(22)
10.25	2007 Employee Stock Purchase Plan	(23)
10.26	Amended and Restated Employment Agreement with Jeffrey H. Buchalter dated April 27, 2007**	(24)
10.27	Amendment dated February 21, 2008 to Amended and Restated Employment Agreement with Jeffrey H. Buchalter**	(25)
10.28	Purchase Agreement between the Company and Drug Royalty LP1 dated as of August 19, 2007	(26)
10.29	Amendment to Amended and Restated Severance Agreement with Paul S. Davit dated November 6, 2007**	(27)
10.30	Amendment to Amended and Restated Severance Agreement with Ralph del Campo dated November 6, 2007**	(27)
10.31	License and Collaboration Agreement dated July 26, 2006 by and between Santaris Pharma A/S and Enzon Pharmaceuticals, Inc.***	+
10.32	Amendment No.1 to License and Collaboration Agreement, dated June 13, 2007 by and between Santaris Pharma A/S and Enzon Pharmaceuticals, Inc.***	+
10.33	Amendment No. 2 to License and Collaboration Agreement, dated June 25, 2007 by and between Santaris Pharma A/S and Enzon Pharmaceuticals, Inc.***	+
10.34	Amendment No. 3 to License and Collaboration Agreement, dated December 21, 2007 by and between Santaris Pharma A/S and Enzon Pharmaceuticals, Inc.***	+
10.35	Amendment to Outstanding Awards Under 2001 Incentive Stock Plan**	+
10.36	2001 Incentive Stock Plan Non-Qualified Stock Plan Terms and Conditions**	+
10.37	2001 Incentive Stock Plan Restricted Stock Unit Award Terms and Conditions**	+
10.38	2001 Incentive Stock Plan Restricted Stock Award Terms and Conditions**	+
12.1	Computation of Ratio of Earnings to Fixed Charges	+
21.1	Subsidiaries of Registrant	+
23.0	Consent of Independent Registered Public Accounting Firm	+
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	+
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	+
32.1	Certification of Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	+

Exhibit Number	Description	Reference No.
32.2	Certification of Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	+

+ Filed herewith

Referenced exhibit was previously filed with the Commission as an exhibit to the Company's filing indicated below and is incorporated herein by reference to that filing:

- (1) Current Report on Form 8-K filed May 19, 2006
- (2) Current Report on Form 8-K filed January 21, 2009
- (3) Form 8-A12G (File No. 000-12957) filed May 22, 2002
- (4) Form 8-A12G/A (File No. 000-12957) filed February 20, 2003
- (5) Current Report on Form 8-K filed January 8, 2008
- (6) Current Report on Form 8-K filed May 25, 2006
- (7) Current Report on Form 8-K filed August 25, 2008
- (8) Registration Statement on Form S-18 (File No. 2-88240-NY)
- (9) Quarterly Report on Form 10-Q for the quarter ended March 31, 1995 filed May 12, 1995
- (10) Transition Report on Form 10-K for the six months ended December 31, 2005.
- (11) Annual Report on Form 10-K for the fiscal year ended June 30, 1993
- (12) Annual Report on Form 10-K for the fiscal year ended June 30, 2003
- (13) Quarterly Report on Form 10-Q for the quarter ended March 31, 2002 filed May 15, 2002
- (14) Quarterly Report on Form 10-Q for the quarter ended September 30, 2006 filed November 2, 2006
- (15) Annual Report on Form 10-K for the fiscal year ended June 30, 2002
- (16) Quarterly Report on Form 10-Q for the quarter ended September 30, 2007 filed November 1, 2007
- (17) Annual Report on Form 10-K for the fiscal year ended June 30, 2005
- (18) Quarterly report on Form 10-Q for the quarter ended June 30, 2007 filed August 2, 2007
- (19) Quarterly Report on Form 10-Q for the quarter ended September 30, 2005 filed November 9, 2005
- (20) Quarterly Report on Form 10-Q for the quarter ended December 31, 2004 filed February 9, 2005
- (21) Quarterly Report on Form 10-Q for the quarter ended March 31, 2005 filed May 10, 2005
- (22) Current Report on Form 8-K filed June 20, 2008
- (23) Form S-8 (File No. 333-140282) filed January 29, 2007
- (24) Quarterly Report on Form 10-Q for the quarter ended March 31, 2007 filed May 4, 2007
- (25) Annual Report on Form 10-K for the year ended December 31, 2007
- (26) Current Report on Form 8-K filed August 20, 2007
- (27) Current Report on Form 8-K filed November 13, 2007

\* Portions of this exhibit have been redacted and filed separately with the Commission pursuant to a confidential treatment request.

\*\* Management contracts or compensatory plans and arrangements required to be filed pursuant to Item 601(b)(10)(ii)(A) or (iii) of Regulation S-K.

\*\*\* The Company has requested confidential treatment of the redacted portions of this exhibit pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended, and has separately filed a complete copy of this exhibit with the Securities and Exchange Commission.

## 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.

### ENZON PHARMACEUTICALS, INC.

(Registrant)

Dated: March 6, 2009

By: /s/ Jeffrey H. Buchalter  
~~Jeffrey H. Buchalter~~  
Chairman, President and  
Chief Executive Officer  
(Principal Executive Officer)

Dated: March 6, 2009

By: /s/ Craig A. Tooman  
~~Craig A. Tooman~~  
Executive Vice President, Finance and  
Chief Financial Officer  
(Principal Executive Officer)  
(Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Name	Title	Date
/s/ Craig A. Tooman _____ Craig A. Tooman	Executive Vice President, Finance and Chief Financial Officer (Principal Financial Officer)	March 6, 2009
/s/ Jeffrey H. Buchalter _____ Jeffrey H. Buchalter	Chairman of the Board	March 6, 2009
/s/ Goran Ando _____ Goran Ando	Director	March 6, 2009
/s/ Rolf A. Classon _____ Rolf A. Classon	Director	March 6, 2009
/s/ Robert LeBuhn _____ Robert LeBuhn	Director	March 6, 2009
/s/ Phillip M. Renfro _____ Phillip M. Renfro	Director	March 6, 2009
/s/ Victor P. Micati _____ Victor P. Micati	Director	March 6, 2009
/s/ Robert C. Salisbury _____ Robert C. Salisbury	Director	March 6, 2009

/s/ Jack Geltosky

Director

March 6, 2009

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Jack Geltosky

ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES

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## Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders  
Enzon Pharmaceuticals, Inc.:

We have audited the accompanying consolidated balance sheets of Enzon Pharmaceuticals, Inc. and subsidiaries (the Company) as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for each of the years in the three-year period ended December 31, 2008. In connection with our audits of the consolidated financial statements, we also have audited the related financial statement schedule. 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 consolidated 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 Enzon Pharmaceuticals, Inc. and subsidiaries as of December 31, 2008 and 2007, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2008, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated 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), the Company's internal control over financial reporting as of December 31, 2008, 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 6, 2009 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

Short Hills, New Jersey  
March 6, 2009

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**

**CONSOLIDATED BALANCE SHEETS**  
(In thousands, except share amounts)

	December 31, 2008	December 31, 2007
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 79,711	\$ 40,053
Short-term investments	65,190	123,907
Restricted investments and cash	—	73,592
Accounts receivable, net	11,692	14,927
Inventories	16,268	22,297
Other current assets	5,281	6,401
Total current assets	178,142	281,177
Property and equipment, net	44,585	45,312
Marketable securities	61,961	20,653
Amortizable intangible assets, net	60,654	68,141
Other assets	3,911	5,074
Total assets	<u>\$ 349,253</u>	<u>\$ 420,357</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 4,443	\$ 9,441
Notes payable	2,950	72,391
Accrued expenses and other	28,701	23,650
Total current liabilities	36,094	105,482
Notes payable	267,550	275,000
Other liabilities	3,948	3,302
Total liabilities	307,592	383,784
Commitments and contingencies		
Stockholders' equity:		
Preferred stock — \$.01 par value, authorized 3,000,000 shares; no shares issued and outstanding at December 31, 2008 and 2007	—	—
Common stock — \$.01 par value, authorized 170,000,000 shares; issued and outstanding: 45,031,908 shares and 44,199,831 shares at December 31, 2008 and 2007, respectively	450	442
Additional paid-in capital	345,088	335,318
Accumulated other comprehensive (loss) income	(1,649)	326
Accumulated deficit	(302,228)	(299,513)
Total stockholders' equity	41,661	36,573
Total liabilities and stockholders' equity	<u>\$ 349,253</u>	<u>\$ 420,357</u>

The accompanying notes are an integral part of these consolidated financial statements.

ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS  
(In thousands, except per share amounts)

	Year Ended December 31,		
	2008	2007	2006
Revenues:			
Product sales, net	\$ 113,789	\$ 100,686	\$ 101,024
Royalties	59,578	67,305	70,562
Contract manufacturing	23,571	17,610	14,067
Total revenues	196,938	185,601	185,653
Costs and expenses:			
Cost of product sales and contract manufacturing	61,702	54,978	50,121
Research and development	58,089	54,624	42,907
Selling, general and administrative	71,310	65,723	70,382
Amortization of acquired intangible assets	667	707	743
Acquired in-process research and development	—	—	11,000
Restructuring charge	2,117	7,741	—
Total costs and expenses	193,885	183,773	175,153
Gain on sale of royalty interest	—	88,666	—
Operating income	3,053	90,494	10,500
Other income (expense):			
Investment income, net	5,967	10,918	24,670
Interest expense	(12,681)	(17,380)	(22,055)
Other, net	1,250	954	8,952
(Loss) income before income tax provision	(2,411)	84,986	22,067
Income tax provision	304	1,933	758
Net (loss) income	<u>\$ (2,715)</u>	<u>\$ 83,053</u>	<u>\$ 21,309</u>
(Loss) earnings per common share — basic	<u>\$ (0.06)</u>	<u>\$ 1.89</u>	<u>\$ 0.49</u>
(Loss) earnings per common share — diluted	<u>\$ (0.06)</u>	<u>\$ 1.29</u>	<u>\$ 0.46</u>
Weighted-average shares — basic	<u>44,398</u>	<u>43,927</u>	<u>43,600</u>
Weighted-average shares — diluted	<u>44,398</u>	<u>72,927</u>	<u>61,379</u>

The accompanying notes are an integral part of these consolidated financial statements.

ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)  
(In thousands)

	Common Stock		Additional	Accumulated	Accumulated	Total
	Number of	Par	Paid-in	Other	Deficit	
	Shares	Value	Capital	Comprehensive		
				Income (Loss)		
<b>Balance, December 31, 2005</b>	43,787	\$ 438	\$ 320,557	\$ (1,090)	\$ (403,875)	\$ (83,970)
Net income	—	—	—	—	21,309	21,309
Other comprehensive income, net of tax:						
Net unrealized gain on available-for-sale securities	—	—	—	676	—	676
Total comprehensive income						21,985
Exercise of stock options	230	2	1,088	—	—	1,090
Share-based compensation	(18)	—	4,454	—	—	4,454
<b>Balance, December 31, 2006</b>	43,999	\$ 440	\$ 326,099	\$ (414)	\$ (382,566)	\$ (56,441)
Net income	—	—	—	—	83,053	83,053
Other comprehensive income, net of tax:						
Net unrealized gain on available-for-sale securities	—	—	—	519	—	519
Currency translation adjustment	—	—	—	221	—	221
Total comprehensive income	83,793					
Exercise of stock options	114	1	576	—	—	577
Share-based compensation	23	—	8,099	—	—	8,099
Issuance of stock for employee stock purchase plan	64	1	544	—	—	545
<b>Balance, December 31, 2007</b>	44,200	\$ 442	\$ 335,318	\$ 326	\$ (299,513)	\$ 36,573
Net loss					(2,715)	(2,715)
Other comprehensive loss, net of tax:						
Net unrealized loss on available-for-sale securities	—	—	—	(1,723)	—	(1,723)
Currency translation adjustment	—	—	—	(252)	—	(252)
Total comprehensive loss						(4,690)
Exercise of stock options	40	—	284	—	—	284
Share-based compensation	663	7	8,321	—	—	8,328
Issuance of stock for employee stock purchase plan	129	1	1,165	—	—	1,166
<b>Balance, December 31, 2008</b>	<u>45,032</u>	<u>\$ 450</u>	<u>\$ 345,088</u>	<u>\$ (1,649)</u>	<u>\$ (302,228)</u>	<u>\$ 41,661</u>

The accompanying notes are an integral part of these consolidated financial statements.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In thousands)

	Year Ended December 31,		
	2008	2007	2006
Cash flows from operating activities:			
Net (loss) income	\$ (2,715)	\$ 83,053	\$ 21,309
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation and amortization	20,123	16,874	13,290
Write-down of manufacturing assets	977	5,124	—
Amortization of debt securities premium/discount	(2,549)	28	689
Write-off and amortization of debt issuance costs	1,345	1,776	4,304
Loss on sale of marketable securities	253	—	—
Gain on sale of equity investment	—	—	(13,844)
(Gain) loss on sale of assets	—	(26)	35
Loss on impairment of available-for-sale securities	645	—	—
Gain on redemption of notes payable	(2,108)	(519)	(9,212)
Acquired in-process research and development	—	—	11,000
Share-based compensation	8,610	8,268	4,454
Changes in operating assets and liabilities:			
Decrease (increase) in accounts receivable, net	3,235	332	(1,172)
Decrease (increase) in inventories	6,029	(4,679)	(1,604)
Decrease (increase) in other current assets	938	(902)	244
(Decrease) increase in accounts payable	(4,998)	(15,340)	14,879
Increase (decrease) in accrued expenses and other	722	6,442	(1,065)
Net cash provided by operating activities	30,507	100,431	43,307
Cash flows from investing activities:			
Purchase of property and equipment	(7,886)	(17,563)	(9,694)
Purchase of acquired in-process research and development	—	—	(11,000)
Purchase of product rights	—	(17,500)	(35,000)
Proceeds from sale of investments in equity securities	—	—	20,209
Proceeds from sale of marketable securities	69,336	205,618	193,250
Purchase of marketable securities	(126,514)	(412,887)	(611,743)
Maturities of marketable securities	147,855	209,727	353,962
Net cash provided by (used in) investing activities	82,791	(32,605)	(100,016)
Cash flows from financing activities:			
Proceeds from exercise of common stock options and issuance of employee stock purchase plan shares	1,450	1,122	1,090
(Redemption) proceeds from employee stock purchase plan	(307)	131	—
Proceeds from issuance of notes payable	—	—	275,000
Redemption of notes payable	(74,783)	(49,732)	(262,146)
Cash payment for debt issuance costs	—	—	(7,726)
Net cash (used in) provided by financing activities	(73,640)	(48,479)	6,218
Net increase (decrease) in cash and cash equivalents	39,658	19,347	(50,491)
Cash and cash equivalents at beginning of year	40,053	20,706	71,197
Cash and cash equivalents at end of year	<u>\$ 79,711</u>	<u>\$ 40,053</u>	<u>\$ 20,706</u>

The accompanying notes are an integral part of these consolidated financial statements.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements**

**(1) Company Overview**

Enzon Pharmaceuticals, Inc. (Enzon or the Company) is a biopharmaceutical company dedicated to developing, manufacturing and commercializing important medicines for patients with cancer and other life-threatening conditions. The Company operates in three business segments: Products, Royalties and Contract Manufacturing. Product sales revenues are comprised of sales of four U.S. Food and Drug Administration (FDA) approved products, Oncaspar, DepoCyt, Abelcet and Adagen. The Company derives income from royalties on sales of products by other companies that use its proprietary PEGylation technology, including PEG-INTRON, marketed by Schering-Plough Corporation (Schering-Plough), Macugen marketed by OSI Pharmaceuticals, Inc. and Pfizer Inc., Pegasys marketed by Hoffmann-La Roche and CIMZIA marketed by UCB Pharma. The Company manufactures products for third parties in its contract manufacturing operations.

The Company's business is subject to significant risks and uncertainties including, but not limited to:

- The risk that the Company will not achieve success in its research and development efforts, including clinical trials conducted by it or its collaborative partners.
- The risk that the Company will experience operating losses for the next several years.
- The risk that there will be a decline in sales of one or more of the Company's marketed products or products sold by others from which the Company derives royalty revenues. Such sales declines could result from increased competition, loss of patent protection, pricing, supply shortages and/or regulatory constraints.
- The risk that the Company will be unable to obtain critical compounds used in the manufacture of its products at economically feasible prices or at all, or that one of its key suppliers will experience manufacturing problems or delays.
- Decisions by regulatory authorities regarding whether and when to approve the Company's regulatory applications as well as their decisions regarding labeling and other matters that could affect the commercial potential of its products or developmental products.
- The risk that the Company will fail to obtain adequate financing to meet its future capital and financing needs.
- The risk that key personnel will leave the Company.

On May 7, 2008, the Company announced that the Board of Directors had authorized a plan to spin-off its biotechnology activities in a transaction that would have resulted in two independent public companies. On August 11, 2008, the Company further announced it was exploring strategic alternatives for its specialty pharmaceuticals business. These alternatives included, among other things, selling the entire specialty pharmaceuticals business, or selling one or more of Enzon's marketed products and its Indianapolis, Indiana manufacturing facility. For various reasons, none of these initiatives were consummated and on December 1, 2008, the Company halted its current pursuit of these initiatives. Through December 31, 2008, \$3.0 million of transaction costs related to these strategic initiatives were incurred and are recorded as general and administrative expense.

**(2) Summary of Significant Accounting Policies**

***Principles of Consolidation***

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. Assets and liabilities of the Company's Canadian operations are translated into U.S. dollar equivalents at rates in effect at the balance sheet date. Translation adjustments are recorded in stockholders' equity in accumulated other comprehensive (loss) income.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

*Use of Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S.) requires management to make estimates and assumptions about future events. These estimates and the underlying assumptions affect the amounts of assets and liabilities reported and disclosures about contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates include the valuation of accounts receivable, inventories, certain investments, intangible assets and other long-lived assets, legal and contractual contingencies and assumptions used in the calculation of share-based compensation and income taxes. These estimates and assumptions are based on management's best estimates and judgment. Management evaluates its estimates and assumptions on an ongoing basis using historical experience, the current economic environment and other factors that management believes to be reasonable under the circumstances. Management adjusts such estimates and assumptions when facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Changes in those estimates will be reflected in the financial statements in future periods.

*Financial Instruments*

The carrying values of cash, cash equivalents, restricted investments and cash, accounts receivable, other current assets, accounts payable and accrued expenses, included in the Company's consolidated balance sheets approximated their fair values at December 31, 2008 and 2007 due to their short-term nature. Short-term investments and marketable securities are carried on the consolidated balance sheets at fair value based primarily on quoted market prices. The carrying value of the Company's 4% convertible senior unsecured notes outstanding at December 31, 2008 and 2007 was \$270.5 million and \$275.0 million, respectively, and the fair value of these notes was \$201.0 million and \$325.6 million at December 31, 2008 and 2007, respectively. The 4.5% convertible subordinated notes were carried at \$72.4 million as of December 31, 2007 and had a fair value of \$72.0 million. The 4.5% convertible subordinated notes were paid according to their terms in 2008. Fair value of the Company's notes payable is based on quoted market prices.

*Cash Equivalents*

The Company considers all highly liquid debt instruments with remaining maturities at the date acquired not exceeding three months to be cash equivalents. Cash equivalents consist primarily of money market funds. As of December 31, 2008 and 2007, the Company held \$41.5 million and \$19.1 million of cash equivalents, respectively.

*Investments and Marketable Securities*

The Company classifies its investments in debt and equity securities as either short-term or long-term based upon their stated maturities and the Company's intent and ability to hold them. Investments with stated maturities of one year or less are classified as current assets. Investments in debt securities with stated maturities greater than one year and marketable equity securities are classified as noncurrent assets when the Company has the intent and ability to hold such securities for at least one year. Short-term investments at December 31, 2007 were further classified as restricted or unrestricted with restricted investments and cash being held exclusively for the repayment or repurchase of the Company's 4.5% convertible subordinated notes due July 1, 2008.

The cost of the debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. The amortization and accretion, along with realized gains and losses, is included in investment income, net. The cost of securities is based on the specific identification method.

Investments in marketable equity securities and debt securities, including auction rate securities are classified as available-for-sale. Debt and marketable equity securities are carried at fair value, with the

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

unrealized gains and losses (which are deemed to be temporary), net of related tax effect, when appropriate, included in the determination of other comprehensive (loss) income and reported in stockholders' equity.

***Investments in Equity Securities***

During the year ended December 31, 2006, the Company sold its remaining 1,023,302 shares of common stock of Nektar Therapeutics, Inc. (Nektar). The disposition of the shares resulted in cash proceeds of \$20.2 million and a gain of \$13.8 million reported in investment income, net in the year ended December 31, 2006.

***Revenue Recognition***

The Company ships product to customers primarily FOB destination and utilizes the following criteria to determine appropriate revenue recognition: persuasive evidence of an arrangement exists, delivery has occurred, selling price is fixed and determinable and collection is reasonably assured. Revenues from product sales are recognized when title passes to the customer, generally at the time of receipt. For product sales, a provision is made at the time of shipment for estimated future credits, chargebacks, sales discounts, rebates, returns (estimates of these adjustments are based on historical trends) and distribution service fees. See below for further information regarding these sales provisions.

Royalty revenue from the Company's agreements with third parties is recognized when the Company can reasonably determine the amounts earned. In most cases, this will be upon notification from the third-party licensee, which is typically during the quarter following the quarter in which the sales occurred. The Company does not participate in the selling or marketing of products for which it receives royalties.

Revenues from contract manufacturing are recognized when title passes to the customer, generally at the time of shipment. At the request of the customer, certain contract manufacturing arrangements involve the transfer of title of the finished product to the customer prior to shipment. The product in question is manufactured to the unique specifications of the customer and cannot be used to fill other orders. If all necessary conditions are met, including: the product is complete and ready for shipment, the risks of ownership have passed to the customer and the customer pays for storage of the product at the Company's facility, the Company will recognize revenue. At year-end 2008, there was approximately \$400,000 of such sales being held at the request of the customer.

***Accounts Receivable***

The Company records its allowance for doubtful accounts by applying historical collection percentages to its aged accounts receivable balances and by analyzing the collectibility of known risks. The Company ages its accounts receivable based on its terms of sales. The allowance for doubtful accounts was \$85,000 and \$280,000 at December 31, 2008 and 2007, respectively. Historically, bad debts have been minimal.

***Accruals for Medicaid Rebates, Returns, Chargebacks and Distribution Service Fees***

With respect to accruals for estimated Medicaid rebates, the Company evaluates its historical rebate payments by product as a percentage of historical sales. This information is used to estimate the proportion of revenue that will result in a rebate. At the time of subsequent rebate payments, the Company records a reduction to accrued expenses and, at the end of each quarter, adjusts accrued expenses for any differences between estimated and actual payments. Product returns are accrued based on historical experience, projected future prescriptions of the products using historical prescription data and the amount and expiry of inventory estimated to be in the distribution channel, based on information obtained from the Company's major customers. Chargeback accruals are based on an estimate of claims not yet submitted by customers, using historical trends and market share data as well as the Company's estimate of inventory in the distribution channel based on information obtained from its major customers. In all cases, judgment is required in estimating these reserves and actual claims for rebates, returns and chargebacks could be materially different

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

from the estimates. The Company has entered into distribution service agreements with three of its largest customers. The Company pays these customers a fixed percentage of revenues in exchange for certain distribution-related services. This expense is accrued at the time of sale to the customer and results in a reduction of the net revenues recorded by the Company.

These sales provision accruals, except for rebates which are recorded as a liability, are presented as a reduction of the accounts receivable balance and totaled \$4.9 million, including \$2.5 million in reserves for chargebacks, as of December 31, 2008. At December 31, 2007 these sales provision accruals totaled \$4.6 million, including \$2.6 million in reserves for chargebacks.

***Inventories***

Inventories are carried at the lower of cost or market. Cost is determined using the first-in, first-out (FIFO) method and includes the cost of raw materials, labor and overhead.

***Property and Equipment***

Property and equipment are stated at cost. Depreciation of fixed assets is provided by the straight-line method over the estimated useful lives of the assets. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts, and any resulting gain or loss is recognized in operations for the period. Amortization of leasehold improvements is calculated using the straight-line method over the remaining term of the lease or the life of the asset, whichever is shorter. The cost of repairs and maintenance is charged to operations as incurred; significant improvements are capitalized.

***Long-Lived Assets***

Long-lived assets, including amortizable intangible assets, are tested for impairment in accordance with the provisions of SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets". This testing is performed when impairment indicators are present. Impairment indicators are events or circumstances that may be indicative of possible impairment such as a significant adverse change in legal factors or in business climate, a current-period operating loss combined with a history of operating losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group. SFAS No. 144 testing for the recoverability of an asset group is performed initially by comparing the carrying amount of the asset group to the future undiscounted net cash flows to be generated by the assets. If the undiscounted net cash flow stream exceeds the carrying amount, no further analysis is required. However, if this test shows a negative relationship, the fair value of the asset group must be determined and the Company would record an impairment charge for any excess of the carrying amount over the fair value. These evaluations involve amounts that are based on management's best estimates and judgment. Actual results may differ from these estimates. Intangible assets are amortized on a straight-line basis over their estimated useful lives.

***Deferred Financing Costs***

Costs incurred in issuing the Company's notes payable have been recorded as deferred financing costs and are included within the balances of other assets and other current assets in the accompanying consolidated balance sheets. Such amounts are being amortized using the straight-line method, which approximates the effective interest method, over the terms of the related financing. The amortization of deferred financing costs is included in interest expense in the accompanying consolidated statements of operations.

***Research and Development***

All research and development costs are expensed as incurred. These include the following types of costs incurred in performing research and development activities: salaries, share-based compensation and benefits, administrative support costs, clinical trials and related clinical manufacturing costs, contract services, and other

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

outside costs. Non-refundable advance payments to acquire goods or pay for services that will be consumed or performed in future periods are capitalized and amortized over the period of expected benefit. Costs to acquire in-process research and development projects and technologies that have no alternative future use at the date of acquisition are expensed as incurred.

***Income Taxes***

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be resolved. The effect of a change in tax rates or laws on deferred tax assets and liabilities is recognized in operations in the period that includes the enactment date of the rate change. A valuation allowance is established to reduce the deferred tax assets to the amounts that are more likely than not to be realized.

In accordance with FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" (FIN 48), tax benefits of uncertain tax positions are recognized only if it is more likely than not that the Company will be able to sustain a position taken on an income tax return. Upon adoption of FIN 48, as amended, as of January 1, 2007, the Company had no tax positions relating to open income tax returns that were considered to be uncertain. Accordingly, the Company had no liability for uncertain positions upon adoption of FIN 48 or during the years ended December 31, 2008 or 2007. Interest and penalties, if any, related to unrecognized tax benefits, would be recognized as income tax expense.

***Foreign Currency Transactions***

Gains and losses from foreign currency transactions, such as those resulting from the translation and settlement of receivables and payables denominated in foreign currencies, are included in the consolidated statements of operations. The Company does not currently use derivative financial instruments to manage the risks associated with foreign currency fluctuations. The Company recorded the impact of foreign currency transaction losses of \$559,000, gains of \$368,000 and losses of \$20,000 for the years ended December 31, 2008, 2007 and 2006, respectively. Gains and losses from foreign currency transactions are included as a component of other income (expense).

***Concentrations of Risk***

The Company's holdings of financial instruments are comprised principally of debt securities, auction rate securities and time deposits. The Company does not invest in portfolio equity securities or commodities or use financial derivatives for trading purposes. The Company seeks reasonable assuredness of the safety of principal and market liquidity by investing in rated securities while at the same time seeking to achieve a favorable rate of return. The Company's market risk exposure consists principally of exposure to changes in interest rates. The Company's holdings also are exposed to the risks of changes in the credit quality of issuers. The Company typically invests the majority of its investments in the shorter-end of the maturity spectrum, and at December 31, 2008 the majority of its holdings were in instruments maturing in two years or less, or having a market that enables flexibility in terms of timing of disposal.

A significant portion of the Company's product sales are to wholesalers in the pharmaceutical industry. The Company monitors the creditworthiness of customers to whom it grants credit terms and has not experienced significant credit losses. The Company does not normally require collateral or any other security to support credit sales. However, the Company maintains limited credit insurance to mitigate potential losses.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

The Company's top three wholesalers accounted for 41 percent, 38 percent and 41 percent of gross product sales for the years ended December 31, 2008, 2007 and 2006, respectively, and 56 percent and 46 percent of the gross accounts receivable balance at December 31, 2008 and 2007, respectively.

***Share-Based Compensation Plans***

The Company recognizes the cost of all share-based payment transactions at fair value in accordance with SFAS No. 123R, "Share-Based Payment (Revised 2004)". The Company adopted SFAS No. 123R using the modified prospective application method under which the provisions of SFAS No. 123R apply to new awards and to awards modified, repurchased, or cancelled after the July 1, 2005 date of adoption. Compensation cost for the portion of the awards for which the requisite service had not been rendered that were outstanding as of the adoption date are being recognized in the consolidated statement of operations in research and development and selling, general and administrative expenses over the remaining service period after the adoption date based on the award's original estimate of fair value (in the case of options, based on the Company's original estimate of fair value, and in the case of restricted stock and restricted stock units, based on the closing price of the Company's common stock on the date of issuance). Compensation costs for option and share awards to employees associated with the manufacturing process are largely embodied in product standard costs and production variances and consequently flow through to cost of product sales and contract manufacturing as inventory is sold.

Expected volatility is based on historical volatility of the Company's common stock; the expected term until exercise represents the weighted average period of time that options granted are expected to be outstanding giving consideration to vesting schedules and the Company's historical exercise patterns; and the risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option.

***Cash Flow Information***

Cash payments for interest were approximately \$13.0 million, \$16.8 million and \$22.9 million for the years ended December 31, 2008, 2007 and 2006, respectively. There were \$2.5 million, \$0.5 million and \$0.1 million of income tax payments made for the years ended December 31, 2008, 2007 and 2006, respectively.

During the quarter ended June 2008, the Company recognized a \$5.0 million liability to Sanofi-Aventis, related to its license of rights to market and distribute Oncaspar in the U.S. Also, in the fourth quarter of 2008, the Company accrued for a \$1.0 million milestone payment to Santaris as a result of its successful filing of an Investigational New Drug application for its Survivin antagonist. These amounts were paid in January 2009.

***Reclassifications***

Prior-year reported amounts of research and development and general and administrative expense have been modified by immaterial amounts in order to reclassify certain patent-related legal costs out of the research and development classification. The reclassified amounts for 2007 and 2006 were \$1.9 million and \$0.6 million, respectively. There was no net effect from these reclassifications on earnings, financial position or cash flows.

**(3) Recent Accounting Pronouncements**

Effective January 1, 2008, the Company adopted the provisions related to financial assets and liabilities of Statement of Financial Accounting Standards No. 157, "Fair Value Measurements", (SFAS No. 157), as amended. SFAS No. 157 provides guidance on the use of fair value in accounting and disclosure for assets and liabilities when such accounting and disclosure is called for by other accounting literature. As amended by Financial Accounting Standards Board (FASB) Staff Position (FSP) 157-2, the applicability of SFAS No. 157 for most nonfinancial assets and nonfinancial liabilities has been delayed to 2009 for calendar-year companies.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

The Company has no significant nonfinancial assets or liabilities that it expects will be affected in 2009 when SFAS No. 157 becomes fully effective.

In December 2007, the FASB issued two statements that would apply prospectively to potential business combinations for which the acquisition date is on or after January 1, 2009. Early application was not permitted. These pronouncements would be adopted at such time as the Company undertakes a business combination and will have no impact on the Company's current financial statements. SFAS No. 141R, "Business Combinations", retains the fundamental requirements of purchase accounting but requires, among other things, the recognition and measurement of any noncontrolling interest and certain previously unrecognized intangible assets such as in-process research and development. It also calls for the recognition of most acquisition costs as expense rather than part of the total acquisition cost and the recognition of a gain in the event of a bargain purchase rather than negative goodwill. SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statement", establishes accounting and reporting standards for the noncontrolling (minority) interest in a subsidiary and for the deconsolidation of a subsidiary.

The Emerging Issues Task Force (EITF) consensus 07-1, "Accounting for Collaborative Agreements", becomes effective January 1, 2009. The consensus prohibits participants in a collaborative agreement from applying the equity method of accounting to activities performed outside a separate legal entity and requires gross or net presentation of revenues and expenses by the respective parties depending upon their roles in the collaboration. The Company is not presently a participant in such collaborative agreements. Accordingly this consensus will have no impact on the Company's current financial statements.

EITF consensus 07-5, "Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock", was issued in June 2008. The issue addresses the determination of whether an instrument (or an embedded feature) is indexed to an entity's own stock and establishes a two-step approach with which to make the determination. Under current U.S. generally accepted accounting principles, the conversion options embedded in the Enzon convertible debt are considered to be indexed to its stock and, as a result, the Company is not required to bifurcate the option from the note payable and mark the option to market each reporting period. The Company is in the process of evaluating the provisions of EITF 07-5, which would take effect prospectively as of January 1, 2009, but at this time does not believe there will be a material effect on its financial position or results of operations. There would be no effect on the Company's cash flows.

**(4) Investments and Marketable Securities**

The amortized cost, gross unrealized holding gains and losses, and fair value for available-for-sale securities by major security type at December 31, 2008 were as follows (in thousands):

	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value*
U.S. corporate debt	\$ 121,492	\$ 223	\$ (1,893)	\$ 119,822
Auction rate securities	3,555	—	(138)	3,417
Other	3,765	451	(304)	3,912
	<u>\$ 128,812</u>	<u>\$ 674</u>	<u>\$ (2,335)</u>	<u>\$ 127,151</u>

\* Included in short-term investments \$65,190 and marketable securities \$61,961 at December 31, 2008.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

The amortized cost, gross unrealized holding gains and losses, and fair value for available-for-sale securities by major security type at December 31, 2007 were as follows (in thousands):

	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value*
U.S. corporate debt	\$ 136,037	\$ 83	\$ (97)	\$ 136,023
U.S. Government and GSE debt	9,796	2	(19)	9,779
Auction rate securities	51,375	—	(240)	51,135
Other	2,308	333	—	2,641
	<u>\$ 199,516</u>	<u>\$ 418</u>	<u>\$ (356)</u>	<u>\$ 199,578</u>

\* Included in short-term investments \$123,907, restricted investments \$55,018 and marketable securities \$20,653 at December 31, 2007.

As of December 31, 2007, restricted investments and cash were held in a separate account for the sole purpose of repayment or repurchase of the Company's 4.5% convertible subordinated notes due July 1, 2008. Restricted investments amounted to \$55.0 million of which \$29.0 million was held in auction rate securities and \$26.0 million in corporate and government debt. Restricted cash amounted to \$18.6 million. In July 2008, the Company paid off all remaining amounts due on its 4.5% notes according to their terms. Amounts remaining in restricted cash after settlement of the 4.5% notes amounted to \$1.8 million and were returned to the Company's unrestricted cash accounts to be used for general corporate purposes.

Other securities include investments of participants in the Company's Executive Deferred Compensation Plan (predominantly mutual fund shares) totaling \$3.5 million fair value as of December 31, 2008 and \$2.3 million as of December 31, 2007. The assets of the deferred compensation plan also included cash of \$0.6 million at December 31, 2007. There is a non-current liability that offsets the aggregate deferred compensation plan assets. In addition, other securities include approximately \$0.4 million fair value of corporate equity securities as of December 31, 2008 and \$0.3 million as of December 31, 2007.

Fair value is determined in accordance with SFAS No. 157, which established a hierarchy of preferred measures based upon the level of market observability used in determining the investment's fair value. The preferred level is that which is derived from readily available quoted prices in active markets (Level 1). As the table below indicates, the majority of the Company's investments and marketable securities are valued based on Level 1 inputs. Recently, due to instability in the financial markets, failed auctions for a certain auction rate security have occurred and, as a result, the Company has had to seek alternative measures of fair value which the Company deems to be Level 2. The model used to value the auction rate security considers listed quotes of bonds with comparable maturities, the underlying collateral of the securities and the issuer's credit worthiness.

The table below indicates the fair value measurements employed as of December 31, 2008 (in thousands):

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Unobservable Inputs (Level 2)	Total
U.S. corporate debt	\$ 119,822	\$ —	\$ 119,822
Auction rate securities	2,700	717	3,417
Other	3,912	—	3,912
	<u>\$ 126,434</u>	<u>\$ 717</u>	<u>\$ 127,151</u>

The majority of the auction rate securities are rated AAA or AA and are variable-rate debt instruments for which interest rates are reset approximately every 28 days. The underlying securities have contractual

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

maturities that are long-term, but because of the historical ability to liquidate holdings at the time of the periodic auctions, they have been classified as short-term, available-for-sale securities. Refer to the analysis of unrealized losses below regarding the impairment of auction rate securities.

Maturities of marketable securities, excluding \$3.9 million (at fair value) of other investments, the majority of which is related to the Company's Executive Deferred Compensation Plan, at December 31, 2008 were as follows (in thousands):

Maturing During the Year ended December 31,	Amortized Cost	Fair Value
2009	\$ 66,063	\$ 64,739
2010	47,180	46,744
2011	11,804	11,756
	<u>\$ 125,047</u>	<u>\$ 123,239</u>

Net realized gains (losses) from the sale of short-term investments, marketable securities and equity securities included in net (loss) income for the years ended December 31, 2008, 2007 and 2006, were a loss of \$0.9 million, a gain of \$0.1 million and a gain of \$13.8 million, respectively.

The following table shows the gross unrealized losses and fair values of the Company's available-for-sale securities (both short-term and long-term) aggregated by investment category and length of time that individual securities have been in a continuous loss position at December 31, 2008 (in thousands):

	Less than 12 months		12 Months or Greater	
	Fair value	Unrealized loss	Fair value	Unrealized loss
U.S. corporate debt <sup>(1)</sup>	\$ 82,840	\$ (1,454)	\$ 10,103	\$ (439)
Auction rate securities	717	(138)	—	—
Other <sup>(2)</sup>	3,460	(304)	—	—
Total	<u>\$ 87,017</u>	<u>\$ (1,896)</u>	<u>\$ 10,103</u>	<u>\$ (439)</u>

<sup>(1)</sup> The unrealized losses on the U.S. corporate debt were attributable to increases in interest rates, as well as bond pricing. The Company invests in bonds that are rated A1 or better, as dictated by its investment policy.

<sup>(2)</sup> Other investments are primarily comprised of assets of the Company's Executive Deferred Compensation Plan. A liability for the fair value of the deferred compensation investments is also maintained. Realized losses related to these investment holdings are borne by the participants.

Impairment assessments are made at the individual security level each reporting period. When the fair value of an investment is less than its cost at the balance sheet date, a determination is made as to whether the impairment is other than temporary and, if it is other than temporary, an impairment loss is recognized in earnings equal to the difference between the investment's cost and fair value at such date. The Company has one investment in auction rate securities at risk with an original cost basis of \$1.5 million that, beginning in the latter portion of 2007, ceased to have successful auctions. For a number of reasons, including the length of time the security had been illiquid and a downgrade in the credit rating of the issuer's securities, the Company wrote down its investment during 2008 to the estimated fair value of the instrument at the time of \$855,000. The impairment write-down of \$645,000 was reflected in investment income, net in the consolidated statement of operations for the year ended December 31, 2008. Subsequent to the date of the write-down, the security and its underlying instruments have experienced significant volatility. As of December 31, 2008 there is a \$138,000 unrealized loss measured from the new basis which is included as part of other comprehensive income (loss). The Company will continue to monitor this instrument, but as of December 31, 2008, it does not consider any

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

of its holdings in auction rate securities to be other than temporarily impaired. Moreover, the Company has the intent and ability to hold these investments to maturity.

As of December 31, 2008, the fair value of the Company's holdings of U.S. corporate debt was lower than the amortized cost basis by approximately \$1.9 million. This net unrealized holding loss was reflective of general capital market conditions affecting 40 separate corporate debt holdings. The Company invests in higher quality instruments and does not perceive problems with the credit-worthiness of any specific issuer. No individual investment constitutes greater than 5 percent of the Company's portfolio. Since the changes in the market value of these investments are due to changes in interest rates and not the credit quality of the issuer, and the Company has the ability and intent to hold these investments until recovery of the cost, the Company does not consider its investments in U.S. corporate debt to be other-than-temporarily impaired at December 31, 2008.

**(5) Inventories**

Inventories consist of the following (in thousands):

	December 31, 2008	December 31, 2007
Raw materials	\$ 9,714	\$ 9,809
Work in process	3,913	5,419
Finished goods	2,641	7,069
	<u>\$ 16,268</u>	<u>\$ 22,297</u>

**(6) Property and Equipment**

Property and equipment consist of the following (in thousands):

	December 31, 2008	December 31, 2007	Estimated Useful lives
Land	\$ 1,500	\$ 1,500	
Building	4,800	4,800	26 years
Leasehold improvements	32,223	32,672	2-14 years *
Equipment	41,329	38,867	2-6 years
Furniture and fixtures and other	4,443	4,504	6 years
	84,295	82,343	
Less: Accumulated depreciation	39,710	37,031	
	<u>\$ 44,585</u>	<u>\$ 45,312</u>	

\* Shorter of the lease term or lives indicated

Depreciation charged to operations relating to property and equipment totaled \$7.6 million, \$6.5 million and \$5.1 million for the years ended December 31, 2008, 2007 and 2006, respectively.

In connection with the closure of the Company's South Plainfield, New Jersey manufacturing facility, the Company accelerated the remaining depreciation on certain assets including leasehold improvements and manufacturing equipment located there. The acceleration amounted to \$0.8 million and \$5.1 million in the years ended December 31, 2008 and 2007, respectively, (Refer to Note 13).

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**(7) Intangible Assets**

Intangible assets consist of the following (in thousands):

	December 31, 2008			Remaining Useful Lives <sup>(1)</sup>	December 31, 2007		
	Cost	Accumulated Amortization	Net		Cost	Accumulated Amortization	Net
<b>Oncaspar</b>							
Marketing rights	\$ 54,008	\$ 21,015	\$ 32,993	6.0 years	\$ 49,008	\$ 13,738	\$ 35,270
Technology rights	17,500	4,713	12,787	5.5 years	17,500	2,389	15,111
<b>DepoCyt</b>							
Marketing rights	12,186	7,312	4,874	4.0 years	12,186	6,093	6,093
<b>Abelcet</b>							
Patents	15,000	5,000	10,000	6.0 years	15,000	3,333	11,667
<b>SCA</b>							
Patents <sup>(2)</sup>	1,875	1,875	—	—	1,875	1,875	—
	<u>\$ 100,569</u>	<u>\$ 39,915</u>	<u>\$ 60,654</u>	5.6 years	<u>\$ 95,569</u>	<u>\$ 27,428</u>	<u>\$ 68,141</u>

<sup>(1)</sup> Weighted average remaining useful lives.

<sup>(2)</sup> Fully amortized

During the quarter ended June 30, 2008, the Company recognized a \$5.0 million intangible asset related to its license of rights from Sanofi-Aventis to market and distribute Oncaspar in the U.S. The license agreement, effective in January 2006, called for this incremental payment upon achievement of a specified level of Oncaspar sales. The threshold sales level was achieved in the third quarter of 2008 and the incremental amount due to Sanofi-Aventis was paid in January 2009. At the time the liability was recognized, the Company immediately recorded \$1.9 million of amortization as a charge to cost of products sold to reflect the benefit derived from the payment over the entire term of the agreement. The remaining \$3.1 million is to be amortized over the remaining six-year term of the agreement.

Amortization of intangibles for the year ended December 31, 2008 was \$12.5 million of which \$11.8 million was charged to cost of products sold and \$0.7 million to amortization expense. Intangible amortization charges totaled \$10.4 million for the year ended December 31, 2007 (\$9.7 million to cost of products sold and \$0.7 million amortization expense).

For existing intangible assets, estimated future annual amortization expense for the years 2009 through 2012 is \$10.8 million per year; \$9.6 million in 2013 and \$6.1 million in 2014. Approximately \$0.7 million each year will be reported as amortization with the remainder charged to cost of products sold. The Company does not have intangibles with indefinite useful lives.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**(8) Notes Payable**

The table below reflects the composition of the notes payable balances as of December 31, 2008 and 2007 (in thousands):

	December 31, 2008	December 31, 2007
<b>Current</b>		
4.0% Convertible Senior Notes repurchased in January 2009	\$ 2,950	\$ —
4.5% Convertible Subordinated Notes due July 1, 2008	<u>\$ —</u>	<u>\$ 72,391</u>
<b>Long-Term</b>		
4% Convertible Senior Notes due June 1, 2013	<u>\$ 267,550</u>	<u>\$ 275,000</u>

The 4.5% notes matured on July 1, 2008 and were repaid in full plus accrued interest.

The 4% notes, with the exception of \$2.9 million principal amount which were repurchased in January 2009, mature on June 1, 2013 unless earlier redeemed, repurchased or converted. The 4% notes are senior unsecured obligations and rank equal to other senior unsecured debt of the Company and all future senior unsecured debt of the Company. The 4% notes may be converted at the option of the holders into the Company's common stock at an initial conversion price of \$9.55 per share. At any time on or after June 1, 2009, if the closing price of the Company's common stock for at least 20 trading days in the 30-consecutive-trading-day period ending on the date one day prior to the date of a notice of redemption is greater than 140 percent of the applicable conversion price on the date of such notice, the Company, at its option, may redeem the 4% notes in whole or in part, at a redemption price in cash equal to 100 percent of the principal amount of the 4% notes to be redeemed, plus accrued and unpaid interest, if any, to the redemption date. The 4% notes are not redeemable prior to June 1, 2009. Upon occurrence of a "fundamental change", as defined in the indenture governing the 4% notes, holders of the notes may require the Company to redeem the notes at a price equal to 100 percent of the principal amount plus accrued and unpaid interest or, in certain cases, to convert the notes at an increased conversion rate based on the price paid per share of the Company's common stock in the transaction constituting the fundamental change.

In August 2008, the Company entered into a first supplemental indenture that amended the notes indenture by:

- (i) eliminating any exceptions to circumstances under which a sale, transfer or lease by Enzon of all or substantially all of its properties or assets to another person would constitute a fundamental change (as defined in the indenture);
- (ii) providing that Enzon may not sell, transfer, lease or otherwise dispose of all or substantially all of its properties or assets unless: (a) an amount in cash sufficient to satisfy its obligations under the indenture to repurchase the notes in the event of a fundamental change is designated by Enzon for such purpose and held in a segregated account for 60 business days after the consummation of the sale, transfer, lease or disposition transaction and (b) no default or event of default under the Indenture will have occurred and be continuing;
- (iii) providing that upon a sale, transfer, lease or other disposition of all or substantially all of Enzon's properties or assets that is a fundamental change, the transferee will not be required to assume Enzon's obligations under the indenture and the notes; and
- (iv) increasing the number of additional shares issuable per \$1,000 initial principal amount of notes upon conversion of the notes in connection with a fundamental change.

During the fourth quarter of 2008, the Company repurchased \$4.5 million principal amount of its 4% notes at a discount to par resulting in a gain of approximately \$1.7 million.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

In December 2008, the Company commenced a tender offer to purchase a portion of its 4% notes. The offer expired on January 21, 2009 with \$2.95 million aggregate principal amount of the notes having been tendered. In January 2009, the Company accepted and repurchased the \$2.95 million principal amount of notes at a purchase price of \$740 per \$1,000 principal amount for a total cost of approximately \$2.2 million (excluding accrued and unpaid interest). The \$2.95 million amount of the notes tendered was classified as a current liability as of December 31, 2008.

Interest on the 4% notes is payable on June 1 and December 1 of each year. Accrued interest on the 4% notes amounted to \$0.9 million and \$1.0 million as of December 31, 2008 and 2007, respectively. Interest on the 4.5% notes was payable January 1 and July 1 of each year. Accrued interest on the 4.5% notes was \$1.6 million as of December 31, 2007.

The Company incurred \$7.7 million of costs in connection with the issuance of the 4% notes in 2006 including legal, accounting and underwriting fees. These costs have been capitalized as a component of other assets and are being amortized over the approximately 84-month term of the 4% notes.

The Company evaluates the accounting for the conversion feature of its convertible notes in accordance with EITF Issue No. 00-19, "Accounting for Derivative Financial Instruments Indexed to and Potentially Settled in, a Company's Own Stock". If the conversion features are required to be bifurcated in the future, changes in the fair value of the conversion features would be included in operations in each period. The Company concluded that no beneficial conversion feature existed at the inception of the notes.

**(9) Accrued Expenses and Other**

Accrued expenses and other consists of the following as of December 31, 2008 and 2007 (in thousands):

	December 31, 2008	December 31, 2007
Accrued compensation	\$ 11,870	\$ 12,731
Accrued Medicaid rebates	2,165	1,382
Accrued professional and consulting fees	476	348
Accrued clinical trial costs	283	281
Accrued insurance and taxes	1,489	2,659
Accrued interest	902	2,545
Accrued marketing rights	5,000	—
Other	6,516	3,704
	<u>\$ 28,701</u>	<u>\$ 23,650</u>

**(10) Stockholders' Equity**

*Preferred Stock*

The Company has authorized 3,000,000 shares of preferred stock in one or more series of which 600,000 are designated as Series B in connection with the Rights Plan.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**Common Stock**

As of December 31, 2008, the Company has reserved shares of its common stock for the purposes detailed below (in thousands):

Non-Qualified and Incentive Stock Plans	10,975
Shares issuable upon conversion of 4% Notes due 2013	28,325
Employee Stock Purchase Plan	807
	<u>40,107</u>

**Rights Plan**

Holders of the Company's common stock own one preferred stock purchase right for each share of common stock owned by such holder. These rights currently entitle holders of our common stock to purchase one one-thousandth of a share of our Series B preferred stock for \$190.00, except, in certain circumstances described below, holders may receive common stock. However, the rights are not immediately exercisable and will become exercisable only upon the occurrence of certain events. If a person or group acquires, or announces a tender or exchange offer that would result in the acquisition of 15 percent or more of our common stock while the stockholder rights plan remains in place, then, unless (1) the rights are redeemed by us for \$0.01 per right or (2) the board of directors determines that a tender or exchange offer for all of our outstanding common stock is in the best interest of the Company and the stockholders, the rights will become exercisable by all rights holders, except the acquiring person or group, for (i) shares of our common stock or (ii) in certain circumstances, shares of the third-party acquirer, each having a value of twice the right's then-current exercise price. Pursuant to an amendment to the rights plan dated January 7, 2008, stockholders who report beneficial ownership of the Company's common stock on Schedule 13G under the Securities Exchange Act of 1934, as amended, may beneficially own less than 20 percent of the outstanding shares of common stock of the Company without becoming an acquiring person and thereby triggering the rights under the plan. The rights expire on May 16, 2012.

**(11) Comprehensive Income**

Comprehensive income consists primarily of net income (loss) and net unrealized gain (loss) on available-for-sale securities and is presented in the consolidated statements of stockholders' equity (deficit).

The following table reconciles net (loss) income to comprehensive (loss) income (in thousands):

	Year Ended December 31,		
	2008	2007	2006
Net (loss) income	\$ (2,715)	\$ 83,053	\$ 21,309
Other comprehensive income (loss) <sup>(1)</sup> :			
Unrealized (loss) gain on securities that arose during the year	(2,634)	624	14,520
Currency translation adjustment	(252)	221	—
Reclassification adjustment for (loss) gain included in net (loss) income	911	(105)	(13,844)
	(1,975)	740	676
Total comprehensive (loss) income	<u>\$ (4,690)</u>	<u>\$ 83,793</u>	<u>\$ 21,985</u>

<sup>(1)</sup> Information has not been tax-effected due to an estimated annual effective tax rate of zero.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**(12) Earnings Per Common Share**

Basic earnings per share is computed by dividing the net (loss) income available to common stockholders, by the weighted average number of shares of common stock outstanding during the period. Restricted stock awards and restricted stock units (collectively, nonvested shares) are not considered to be outstanding shares until the service vesting period has been completed.

For purposes of calculating diluted (loss) earnings per share, the denominator includes both the weighted average number of shares of common stock outstanding and the number of common stock equivalents if the inclusion of such common stock equivalents is dilutive. Dilutive common stock equivalents potentially include stock options and nonvested shares using the treasury stock method, shares issuable under the employee stock purchase plan (ESPP) and the number of shares issuable upon conversion of the Company's convertible subordinated notes and/or convertible senior notes payable. In the case of notes payable, the diluted earnings per share calculation is further affected by an add-back of interest to the numerator under the assumption that the interest would not have been incurred if the notes were converted into common stock.

The following table represents the reconciliation of the numerators and denominators of the basic and diluted (loss) earnings per share computations for net (loss) income available for common stockholders for the years ended December 31, 2008, 2007 and 2006 (in thousands):

	Year Ended December 31,		
	2008	2007	2006
<b>Earnings Per Common Share — Basic:</b>			
Net (loss) income	\$ (2,715)	\$ 83,053	\$ 21,309
Weighted average common shares outstanding	44,398	43,927	43,600
Basic (loss) earnings per share	\$ (0.06)	\$ 1.89	\$ 0.49
<b>Earnings Per Common Share — Diluted:</b>			
Net (loss) income	\$ (2,715)	\$ 83,053	\$ 21,309
Add back interest expense on 4% convertible notes, net of tax	*	11,000	6,661
Adjusted net income	\$ (2,715)	\$ 94,053	\$ 27,970
Weighted-average common shares outstanding	44,398	43,927	43,600
Weighted-average incremental shares related to ESPP and vesting of nonvested awards	*	204	—
Weighted-average incremental shares assuming conversion of 4% notes	*	28,796	17,779
Weighted-average number of common shares outstanding and common share equivalents	44,398	72,927	61,379
Diluted (loss) earnings per share	\$ (0.06)	\$ 1.29	\$ 0.46

\* For the year ended December 31, 2008, the effect of inclusion of all potentially dilutive common stock equivalents and the add back of interest upon assumed conversion of notes payable would have been anti-dilutive. Consequently, reported dilutive loss per share is equal to basic loss per share.

For the years ended December 31, 2008, 2007 and 2006, the Company had potentially dilutive common stock equivalents, other than those related to the 4% convertible notes in 2007 and 2006, excluded from the computation of diluted earnings per share, amounting to 38.8 million, 9.4 million and 9.7 million, shares, respectively. These common stock equivalents would have been anti-dilutive. The 4.5% convertible

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

subordinated notes have had no dilutive effect due to the fact that their historically relatively high conversion price influences the denominator of the earning-per-share computation less significantly than does the add-back of interest to the numerator.

**(13) Restructuring**

Restructuring charges in 2008 related to the programs initiated in the first quarter of 2007 to consolidate manufacturing operations in its Indianapolis, Indiana location. This action was taken as part of the Company's continued efforts to streamline its operations. Also during 2007, the Company combined its previous two specialized sales forces into one.

The Company incurred the following costs in connection with its restructuring programs during the years ended December 31, 2008 and 2007. All restructuring charges are related to the Products segment. Amounts are in thousands.

	Year Ended December 31, 2008	Year Ended December 31, 2007	Total
Employee termination costs — manufacturing	\$ 1,299	\$ 2,232	\$ 3,531
— sales forces	—	385	385
	1,299	2,617	3,916
Write-down of manufacturing assets	810	5,124	5,934
Other	8	—	8
Restructuring charge	<u>\$ 2,117</u>	<u>\$ 7,741</u>	<u>\$ 9,858</u>

The amounts for employee termination costs, including severance and related benefits, are reflected in accrued expenses. Severance payments related to the manufacturing restructuring commenced during 2008 with the successful transfer of production to the Company's Indianapolis facility and closure of the South Plainfield facility and are expected to continue into 2009. Payments in connection with the sales force restructuring ended during 2007. Aggregate payments to terminated employees in connection with these programs have amounted to \$2.7 million through the end of 2008. Also, during 2008, prior accruals for certain benefits provided to exiting employees were adjusted downward by \$0.2 million based on actual utilization. The liability was \$1.2 million and \$2.2 million as of December 31, 2008 and 2007, respectively.

Write-down of manufacturing assets comprises the acceleration of amortization of leasehold improvements at the South Plainfield facility in 2008 resulting from a reassessment of the estimated time to complete the manufacturing consolidation. During 2007, depreciation of certain assets consisting primarily of manufacturing equipment that would not be transferred to the Indianapolis facility nor have any future use to the Company was accelerated.

In addition to the restructuring charges described above, costs incurred during 2007 related to validation batches at the Indianapolis facility for Oncaspar and Adagen, were expensed and included in cost of product sales in the amount of \$1.9 million.

The Company's use of the leased South Plainfield facility has ended, but it continues to incur monthly rental costs related to the facility aggregating \$0.2 million annually which the Company began charging to general and administrative expense in the fourth quarter of 2008. The Company may experience additional restructuring charges associated with the lease or its termination prior to the contractual expiration of the lease in October 2012.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**(14) Gain on Sale of Royalty Interest**

During 2007, the Company sold a 25-percent interest in future royalties payable to it by Schering-Plough on net sales of PEG-INTRON occurring after June 30, 2007. The gain on the sale of the royalty interest, net of related costs, was \$88.7 million and was recognized in full at the time of the sale. The Company has no continuing involvement in the selling or marketing of PEG-INTRON nor does it have any impact on the future royalty stream. The upfront payment of \$92.5 million received is non-refundable, is fixed in amount and is not dependent on the future royalty stream of PEG-INTRON. The purchaser of the 25-percent interest will be obligated to pay an additional \$15.0 million to the Company in the first quarter of 2012 if it receives a certain threshold level of royalties on sales of PEG-INTRON occurring from July 1, 2007 through December 31, 2011. The \$15.0 million contingent gain will be recognized when and if the contingency is removed and collection is assured.

**(15) Stock Options**

Through the Compensation Committee of the Board of Directors, the Company administers the 2001 Incentive Stock Plan which provides incentive and non-qualified stock option benefits for employees, officers, directors and consultants. Options granted to employees generally vest over four years from date of grant and options granted to directors vest after one year. The exercise price of the options granted must be at least 100 percent of the fair value of the Company's common stock at the time the options are granted. Options may be exercised for a period of up to ten years from the date they are granted. As of December 31, 2008, 11.0 million shares of common stock were reserved for issuance pursuant to granted options and awards under the plan. A 1987 Non-Qualified Stock Option Plan was adopted by the Company's Board of Directors in November 1987 and expired effective November 2007. Accordingly no additional grants of stock options are to be made from the 1987 plan although previously awarded option grants remain outstanding.

The 2001 Incentive Stock Plan was adopted by the Board of Directors in October 2001 and approved by the stockholders in December 2001. This Plan, as amended, had 10.0 million shares of common stock issuable for the grant of stock options and other stock-based awards to employees, officers, directors, consultants, and independent contractors providing services to Enzon and its subsidiaries as determined by the Board of Directors or by a committee of directors designated by the Board of Directors to administer the plan. Approximately 1.3 million shares remain available for grant as of December 31, 2008.

In April 2007, the Board of Directors adopted a new compensation plan for non-employee directors (the 2007 Outside Director Compensation Plan or the 2007 Plan). Under the 2007 Plan, each non-employee director is to receive options to purchase shares of common stock annually on the first trading day of the calendar year. Using the Black-Scholes option pricing model, each eligible participant may purchase that number of shares that aggregates \$75,000 in value. These grants are made under the 2001 Incentive Stock Plan. The exercise price of the annual grant is equal to the closing price of the common stock on the date of grant; it vests in one tranche on the first anniversary date; and expires on the tenth anniversary date of the grant. In addition, upon election of a new non-employee director to the Board, such newly elected director is to receive a grant of options with a Black-Scholes value of \$75,000 to purchase shares of common stock (the exercise price of which is equal to the closing price of the common stock on the date of grant). These options vest in three equal tranches on each of the first three anniversaries of the date of grant, if the recipient director remains on the Board on each such date. Furthermore, for the Chairperson of the Board, if not an employee of the Company, the number of options granted annually and upon election is twice the number mentioned above.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

The following is a summary of the activity in the Company's outstanding Stock Option Plans which include the 2001 Incentive Stock Plan and the 1987 Non-Qualified Stock Option Plan (options in thousands):

	Options	Weighted Average Exercise Price Per Option	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (\$000)
Outstanding at January 1, 2008	8,385	\$ 11.36		
Granted at exercise prices which equaled the fair value on the date of grant	200	\$ 9.22		
Exercised	(40)	\$ 7.12		
Forfeited	(3)	\$ 7.77		
Expired	(170)	\$ 12.97		
Outstanding at December 31, 2008	<u>8,372</u>	\$ 11.30	6.58	\$ 1,733
Vested and expected to vest at December 31, 2008	<u>7,726</u>	\$ 11.56	6.49	\$ 1,651
Exercisable at December 31, 2008	<u>6,021</u>	\$ 12.50	6.09	\$ 1,476

The weighted-average grant-date fair value of options granted during the years ended December 31, 2008, 2007 and 2006 was \$3.44, \$3.57 and \$3.46, respectively. The total intrinsic value of options exercised during the years ended December 31, 2008, 2007 and 2006 was \$83,000, \$190,000, \$778,000, respectively.

In the years ended December 31, 2008, 2007 and 2006, the Company recorded share-based compensation of \$3.9 million, \$4.8 million and \$2.7 million, respectively, related to stock options, which was included in the Company's net income for the period, predominantly in selling, general and administrative expense. No compensation costs were capitalized into inventory during either period nor did the Company realize a net tax benefit related to share-based compensation expense. The Company's policy is to use newly issued shares to satisfy the exercise of stock options.

Cash received from share option exercise for the years ended December 31, 2008, 2007 and 2006, was \$0.3 million, \$0.6 million and \$1.1 million, respectively.

The Company uses the Black-Scholes option-pricing model to determine the fair value of stock options. The Company's weighted average assumptions for expected volatility, expected term until exercise and risk-free interest rate are shown in the table below. Expected volatility is based on historical volatility of the Company's common stock. The expected term of options is estimated based on the Company's historical exercise pattern. The risk-free interest rate is based on U.S. Treasury yields for securities in effect at the time of grant with terms approximating the expected term until exercise of the option. No dividend payments were factored into the valuations. Forfeiture rates, used for determining the amount of compensation cost to be recognized over the service period, are estimated based on stratified historical data. As of December 31, 2008, there was \$5.7 million of total unrecognized compensation cost related to unvested options that the Company expects to recognize over a weighted-average period of 13 months. During the year ended December 31, 2008, the grant-date fair value of options that vested was \$3.7 million.

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
Risk-free interest rate	3.5%	4.7%	4.8%
Expected volatility	34%	37%	43%
Expected term (in years)	5.4	5.5	5.2

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

During 2005, prior to adoption of SFAS No. 123R, the Board of Directors accelerated the vesting of certain stock options previously awarded to officers, directors and employees. The Board's decision to accelerate the vesting of these options was in response to a review of the Company's long-term incentive compensation programs in light of changes in market practices, current market prices of the Company's stock and recently issued changes in accounting rules resulting from the issuance of SFAS No. 123R, which the Company was required to adopt effective July 1, 2005. Management believed that accelerating the vesting of these options prior to the adoption of SFAS No. 123R may have resulted in the Company not having to recognize compensation expense in the years ended December 31, 2008, 2007 and 2006 in the amounts of \$3.6 million, \$7.6 million and \$9.6 million, respectively and potentially as much as \$0.6 million in 2009.

**(16) Restricted Stock and Restricted Stock Units (Nonvested Shares)**

The 2001 Incentive Stock Plan provides for the issuance of restricted stock and restricted stock units (collectively referred to in SFAS No. 123R as "nonvested shares") to employees, officers and directors. These awards effectively are the issuance by the Company to the recipient of shares of the Company's common stock at either the date of the grant, in the case of a restricted stock award, or upon vesting, in the case of a restricted stock unit. The recipient pays no cash to receive the shares other than the \$0.01 par value in some cases. These awards have vesting periods of three to five years.

Pursuant to the 2007 Outside Director Compensation Plan, each non-employee director is to receive a grant of restricted stock units for shares of common stock with a value of \$75,000 annually on the first trading day after June 30. This grant is made under the 2001 Incentive Stock Plan. The number of shares covered by the annual grant is equal to \$75,000 divided by the closing price of the common stock on the date of grant; it vests in three equal tranches on each of the first three anniversaries of the date of the grant if the recipient director remains on the Board on each such date. In addition, upon election of a new non-employee director to the Board, such newly elected director is to receive a grant of restricted stock units for shares of common stock in the amount of \$75,000 (the number of shares covered by such grant being equal to \$75,000 divided by the closing price of the common stock on the date of grant). These restricted stock units vest in three equal tranches on each of the first three anniversaries of the date of grant, if the recipient director remains on the Board on each such date. Furthermore, for the Chairperson of the Board, if not an employee of the Company, the number of restricted stock units granted annually and upon election is twice the number mentioned above.

All nonvested shares are valued at fair value under SFAS No. 123R. The market price of the Company's stock at grant date is factored by an expected vesting period forfeiture rate based on stratified historical data. This amount is then amortized over the vesting period on a straight-line basis.

A summary of nonvested shares as of December 31, 2008 and changes during the year ended December 31, 2008 is provided below (shares in thousands):

	Number of Nonvested Shares	Weighted Average Grant Date Fair Value Per Share
Nonvested at January 1, 2008	1,774	\$ 8.14
Granted	508	\$ 8.97
Vested	(428)	\$ 8.51
Forfeited	(94)	\$ 7.79
Nonvested at December 31, 2008	<u>1,760</u>	<u>\$ 8.31</u>

As of December 31, 2008, there was \$9.0 million of total unrecognized compensation cost related to nonvested shares that the Company expects to be recognized over a weighted average period of 19 months. The

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

total grant-date fair value of nonvested shares that vested during the year ended December 31, 2008 was \$3.4 million.

In the years ended December 31, 2008, 2007 and 2006, the Company recorded share-based compensation expense of \$4.4 million, \$3.3 million and \$1.7 million related to nonvested share awards, which is included in the Company's net income for the period, predominantly in selling, general and administrative expenses. No compensation costs were capitalized into inventory during these periods. The Company's policy is to use newly issued shares to satisfy nonvested share awards. There has been no tax benefit realized to date related to tax deductions for nonvested shares.

**(17) Employee Stock Purchase Plan**

In January 2007, the Board of Directors adopted the 2007 Employee Stock Purchase Plan (ESPP) which was approved by the Company's stockholders in May 2007. An initial one million shares were reserved for issuance under the plan. All benefit-eligible employees of the Company may participate in the ESPP other than those who own shares or hold options or nonvested shares representing a combined 5 percent or more of the voting power of the Company's outstanding stock. The ESPP permits eligible employees to purchase common stock through payroll deductions which may not exceed 15 percent of the employee's compensation, as defined, at a price equal to 85 percent of the fair market value of the shares at the beginning of the offering period (grant date) or at the end of the offering period (purchase date), whichever is lower. There are two six-month offering periods in each plan fiscal year, beginning April 1 and October 1. The ESPP is intended to qualify under section 423 of the Internal Revenue Code. Individual participant purchases within a given calendar year are limited to \$25,000 (\$21,250 based on the 15-percent discount) and no more than 2,500 shares on any single purchase date. Unless terminated sooner, the ESPP will terminate on January 25, 2017.

The fair value of shares to be issued under the ESPP is estimated at the grant date and is comprised of two components: the 15-percent discount to fair value of the shares at grant date and the value of the option granted to participants pursuant to which they may purchase shares at the lower of either the grant date or the purchase date fair value. The option component is valued using the Black-Scholes option pricing model.

The initial assumptions used in the valuation for each offering period are reflected in the following table (no dividends were assumed):

	October 1, 2008	April 1, 2008	October 1, 2007	April 1, 2007
Risk-free interest rate	1.79%	1.55%	4.50%	4.50%
Expected volatility	41.00%	35.00%	30.73%	20.00%
Expected term (in years)	0.5	0.5	0.5	0.5

Increases in individual withholding rates within the offering period could have the effect of establishing a new measurement date for that individual's future contributions. Compensation expense recognized for the ESPP was approximately \$0.3 million and \$0.2 million for the years ended December 31, 2008 and 2007, respectively, which was recorded in the same expense categories in the consolidated statement of operations as the underlying employee compensation. Amounts withheld from participants are classified as cash from financing activities in the cash flow statement and as a liability in the balance sheet until such time as shares are purchased. There were two stock purchases under the ESPP during the year ended December 31, 2008. Based upon the purchase price established as of March 31, 2008 and September 30, 2008, 129,052 shares were allocated under the plan. Cash received from ESPP for the years ended December 31, 2008 and 2007 was \$1.2 million and \$0.5 million, respectively.

**(18) Income Taxes**

Under the asset and liability method of SFAS No. 109, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between financial statement carrying amounts

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under SFAS No. 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The components of the income tax provision are summarized as follows (in thousands):

	Year Ended December 31,		
	2008	2007	2006
<b>Current:</b>			
Federal	\$ 224	\$ 1,331	\$ 127
State	31	194	456
Foreign	49	408	175
<b>Total current</b>	<b>304</b>	<b>1,933</b>	<b>758</b>
<b>Deferred:</b>			
Federal	—	—	—
State	—	—	—
<b>Total deferred</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Income tax provision</b>	<b><u>\$ 304</u></b>	<b><u>\$ 1,933</u></b>	<b><u>\$ 758</u></b>

The following table represents a reconciliation between the reported income taxes and the income taxes that would be computed by applying the federal statutory rate (35%) to income before taxes (in thousands):

	Year Ended December 31,		
	2008	2007	2006
Income tax provision (benefit) computed at federal statutory rate	\$ (844)	\$ 29,745	\$ 7,723
Nondeductible expenses	525	414	265
<b>Add (deduct) effect of:</b>			
State income taxes, net of federal tax	1,930	4,393	1,950
Federal research and development tax credits	(881)	(1,105)	(1,395)
Foreign income taxes	49	408	175
Decrease in beginning of period valuation allowance	(475)	(31,922)	(7,960)
<b>Income tax provision</b>	<b><u>\$ 304</u></b>	<b><u>\$ 1,933</u></b>	<b><u>\$ 758</u></b>

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

As of December 31, 2008 and 2007, the tax effects of temporary differences that give rise to the deferred tax assets and deferred tax liabilities are as follows (in thousands):

	December 31, 2008	December 31, 2007
Deferred tax assets:		
Inventories	\$ 2,158	\$ 747
Accrued compensation	7,032	5,410
Returns and allowances	3,400	3,811
Research and development credits carryforward	20,720	19,690
Federal alternative minimum tax credits	3,230	3,044
Capital loss carryforwards	3,863	3,987
Write-down of carrying value of investment	3,301	3,407
Federal and state net operating loss carryforwards	32,348	25,840
Acquired in-process research and development	9,890	11,107
Unrealized loss on securities	657	20
Goodwill	35,189	40,433
Intangible assets	46,669	50,619
Share-based compensation	868	728
Other	1,741	1,593
Tax basis in excess of book basis of acquired assets	—	207
Total gross deferred tax assets	171,066	170,643
Less valuation allowance	(170,168)	(170,643)
	898	—
Deferred tax liabilities:		
Book basis in excess of tax basis of acquired assets	(898)	—
	(898)	—
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. At December 31, 2008, the Company had federal net operating loss carryforwards of approximately \$79.5 million that will expire in the years 2021 through 2028 and combined state net operating loss carryforwards of approximately \$98.6 million that will expire in the years 2009 through 2028. The Company also has federal research and development tax credit carryforwards of approximately \$16.2 million for tax reporting purposes, which expire in the years 2009 through 2028. In addition, the Company has \$4.6 million of state research and development tax credit carryforwards, which will expire in the years 2016 through 2024. The Company's ability to use the net operating loss and research and development tax credit carryforwards is subject to certain limitations due to ownership changes, as defined by rules pursuant to Section 382 of the Internal Revenue Code of 1986, as amended.

As of December 31, 2008, management believes that it is more likely than not that the net deferred tax assets will not be realized, based on future operations, consideration of tax strategies and the reversal of deferred tax liabilities. As of December 31, 2008 and 2007, the Company had deferred tax assets of \$171.1 million and \$170.6 million, respectively. The Company has maintained a valuation allowance of \$170.2 million and \$170.6 million at December 31, 2008 and 2007, respectively.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

The Company files income tax returns in the U.S. federal jurisdiction, various state jurisdictions and Canada. The Company is currently not under examination by the U.S. Internal Revenue Service, however, the tax years 2005 through 2007 remain open to examination. State income tax returns for the states of New Jersey and Indiana are generally subject to examination for a period of 3-4 years after filing of the respective returns. Examination of the Company's state income tax returns for the State of New Jersey has recently concluded. The Company's Indiana state income tax returns are not currently under examination. Income tax returns for Canada are generally subject to examination for a period of 3-5 years after filing of the respective return. The Company's income tax returns are currently not under examination by Revenue Canada.

**(19) Significant Agreements**

***Santaris Pharma A/S License Agreement***

In July 2006, the Company entered into a license agreement with Santaris Pharma A/S (Santaris) for up to eight RNA antagonists. The Company obtained rights worldwide, other than Europe, to develop and commercialize RNA antagonists directed against the HIF-1 alpha and Survivin gene targets, as well as RNA antagonists directed against six additional gene targets selected by the Company. The Company made an initial payment of \$8.0 million in the third quarter of 2006 and an additional \$3.0 million in the fourth quarter of 2006 to Santaris for the rights to the HIF-1 alpha and Survivin antagonists and for identification of the six additional gene targets, respectively. The \$11.0 million aggregate payment is reported as acquired in-process research and development in the consolidated statements of operations for the year ended December 31, 2006. Milestone payments of \$6.0, \$2.0 million and \$5.0 million were made pursuant to this agreement in 2008, 2007 and 2006, respectively, and were included in research and development in the accompanying statements of operations. The Company could pay an additional \$243.0 million in milestone payments upon successful completion of certain compound synthesis and selection, clinical development and regulatory milestones. Santaris is also eligible to receive royalties from any future product sales from products based on the licensed antagonists. Santaris retains the right to develop and commercialize products developed under the agreement in Europe.

***Schering-Plough Agreement***

As a result of a November 1990 agreement between the Company and Schering-Plough, the Company's PEG technology was used to develop an improved version of Schering-Plough's product INTRON A. Schering-Plough is responsible for marketing and manufacturing the product, PEG-INTRON, worldwide on an exclusive basis and the Company receives royalties on worldwide sales of PEG-INTRON for all indications. Schering-Plough's obligation to pay the Company royalties on sales of PEG-INTRON terminates, on a country-by-country basis, upon the later of the date the last patent to contain a claim covering PEG-INTRON expires in the country or 15 years after the first commercial sale of PEG-INTRON in such country. Currently, expirations are expected to occur in 2016 in the U.S., 2018 in Europe and 2019 in Japan. The royalty percentage to which the Company is entitled will be lower in any country where a PEGylated alpha-interferon product is being marketed by a third party in competition with PEG-INTRON where such third party is not Hoffmann-La Roche. Either party may terminate the agreement upon a material breach of the agreement by the other party that is not cured within 60 days of written notice from the non-breaching party or upon declaration of bankruptcy by the other party.

The Company does not supply Schering-Plough with PEG-INTRON or any other materials and our agreement with Schering-Plough does not obligate Schering-Plough to purchase or sell specified quantities of any product. Further, the Company has no involvement in the selling or marketing of PEG-INTRON.

During the quarter ended September 30, 2007, the Company sold a 25-percent interest in future royalties payable to it by Schering-Plough Corporation on net sales of PEG-INTRON occurring after June 30, 2007.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

***Sanofi-Aventis License Agreements***

The Company reacquired the rights to market and distribute Oncaspar in the U.S., Mexico, Canada and most of the Asia/Pacific region from Sanofi-Aventis in 2002. In return for the marketing and distribution rights, the Company paid Sanofi-Aventis \$15.0 million and was also obligated to pay a royalty on net sales of Oncaspar in the U.S. and Canada through 2014. The \$15.0 million payment is being amortized on a straight-line basis over 14 years. The license agreement may be terminated earlier by Sanofi-Aventis upon 60 days' notice if the Company fails to make the required royalty payments or the Company decides to cease selling Oncaspar. Following the expiration of the agreement in 2014, all rights will revert back to the Company, unless the agreement is terminated earlier. Effective in January 2006, the Company further amended its license agreement with Sanofi-Aventis for Oncaspar. In exchange for an upfront cash payment of \$35.0 million, the Company obtained a significant reduction in its royalty rate. Also, pursuant to the terms of the agreement, the Company became liable to Sanofi-Aventis during 2008 for a \$5.0 million milestone payment due in January 2009 as a result of Oncaspar net sales in the U.S. and Canada exceeding \$35.0 million for two consecutive calendar years. The \$35.0 million January 2006 upfront payment and the associated \$5.0 million milestone payment accrued in 2008 are both being amortized on a straight-line basis through June 2014. The Company is obligated to make royalty payments through June 30, 2014, at which time all of its royalty obligations will cease.

***Medac License Agreement***

In January 2002, the Company renewed an exclusive license to medac GmbH (medac), a private company based in Germany, to sell Oncaspar and any PEG-asparaginase product developed by the Company or medac during the term of the agreement in most of Europe and parts of Asia. The Company's supply agreement with medac provides for medac to purchase Oncaspar from the Company at certain established prices and meet certain minimum purchase requirements. Medac is responsible for obtaining additional approvals and indications in the licensed territories beyond the currently approved indication in Germany. The initial term of the agreement was for five years and automatically renewed for an additional five years through the end of 2011. Thereafter, the agreement will automatically renew for an additional two years unless either party provides written notice of its intent to terminate the agreement at least 12 months prior to the scheduled expiration date. Following the expiration or termination of the agreement, all rights granted to medac will revert back to the Company.

***Micromet Alliance***

The Company has agreements with Micromet, including a cross-license agreement between the parties and a marketing agreement under which Micromet is the exclusive marketer of the two companies' combined intellectual property estate in the field of single-chain antibody (SCA) technology. Micromet is the exclusive marketing partner and has instituted a comprehensive licensing program on behalf of the partnership. Any resulting revenues from the license agreements executed by Micromet on behalf of the partnership will be shared equally by the two companies. In 2008, 2007 and 2006, the Company recorded \$0.5 million, \$0.8 million and \$0.7 million, respectively related to its share of revenues from Micromet's licensing activities.

***Nektar Agreement***

In January 2002, the Company entered into a PEGylation technology licensing agreement with Nektar under which the Company granted Nektar the right to grant sub-licenses for a portion of its PEGylation technology and patents to third parties. Nektar had the right to sub-license Enzon's patents that were defined in the January 2002 agreement and the Company will receive a royalty or a share of Nektar's profits for any products that utilize the Company's patented PEGylation technology. Effective in January 2007, Nektar's right to grant additional sublicenses is limited to a certain class of our PEGylation technology. Existing sublicenses granted by Nektar prior to January 2007 were unaffected. Currently, the Company is aware of five third-party

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

products for which Nektar has granted sublicenses to our PEGylation technology, including Hoffmann-La Roche's Pegasys (peginterferon alfa-2a), OSI Pharmaceutical's Macugen (pegaptanib sodium injection), UCB's Cimzia™ (certolizumab pegol, CDP870), Affymax and Takeda Pharmaceutical's Hematide™ and an undisclosed product of Pfizer's.

In January and February 2006, the Company sold its remaining interest in shares of Nektar acquired as part of a 2002 patent infringement suit resulting in a net gain of \$13.8 million and cash proceeds of \$20.2 million in 2006.

***Pacira Agreement***

In December 2002, the Company entered into an agreement with Pacira (formerly known as SkyePharma PLC), under which the Company licensed the U.S. and Canadian rights to Pacira's DepoCyt, an injectable chemotherapeutic approved for the treatment of patients with lymphomatous meningitis. Under the terms of the agreement, the Company paid Pacira a license fee of \$12.0 million. Pacira manufactures DepoCyt and the Company purchases finished product at 35 percent of the Company's net sales price, which percentage can be reduced should a defined sales target be exceeded. The Company has recorded the \$12.0 million license fee as an intangible asset that is being amortized over a ten-year period.

Under this agreement, the Company is required to maintain sales levels equal to \$5.0 million for each calendar year (Minimum Sales) through the remaining term of the agreement. Pacira is also entitled to a milestone payment of \$5.0 million if the Company's sales of the product exceed a \$17.5 million annual run rate for four consecutive quarters and an additional milestone payment of \$5.0 million if the Company's sales exceed an annualized run rate of \$25.0 million for four consecutive quarters. For the year December 31, 2008, net sales of DepoCyt were approximately \$9.0 million. The Company is also responsible for a milestone payment of \$5.0 million if the product receives approval of an indication for all neoplastic meningitis.

The Company's license is for an initial term of ten years, to December 2012, and is automatically renewable for successive two-year terms thereafter. Either party may terminate the agreement early upon a material breach by the other party, which breach the other party fails to cure within 60 days after receiving notice thereof. Further, Pacira will be entitled to terminate the agreement early if the Company fails to satisfy its Minimum Sales for two consecutive years.

***Cephalon Manufacturing Agreements***

Cephalon France SAS (Cephalon) owns the right to market Abelcet in any markets outside of the U.S., Canada and Japan. The Company's manufacturing agreements with Cephalon require that the Company supply Cephalon with Abelcet and MYOCET through November 22, 2011 and January 1, 2010, respectively. The selling price is fixed, subject to an annual Producer Price Index adjustment.

***Ovation Pharmaceuticals, Inc. Agreements***

In December 2006, the Company entered into supply and license agreements with Ovation. Pursuant to the agreements, Ovation would supply to the Company specified quantities of the active ingredient used in the production of Oncaspar during calendar years 2008 and 2009. Additionally, Ovation granted to the Company, in exchange for \$17.5 million, a non-exclusive, fully-paid, perpetual, irrevocable, worldwide license to the cell line from which such ingredient is derived. The intangible asset is being amortized on a straight-line basis through June 30, 2014. The Company has agreed to effectuate, at its cost, a technology transfer of the cell line and manufacturing capabilities for the ingredient from Ovation to the Company (or a third party manufacturer on behalf of the Company) no later than December 31, 2009. The Company further agreed to supply specified quantities of the ingredient to Ovation, at Ovation's option, in calendar years 2010-2012. Refer to Note 20, Commitments and Contingencies, below.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**(20) Commitments and Contingencies**

In connection with the Company's December 2006 license and supply agreements with Ovation for the active ingredient used in the production of Oncaspar, the Company has committed to effectuate a technology transfer of the manufacturing capabilities for that ingredient from Ovation by no later than December 31, 2009 and to supply specified quantities of the active ingredient to Ovation, at Ovation's option, for up to three years thereafter. In the event the Company fails to deliver all such quantities ordered by Ovation in 2010, 2011 or 2012, the Company will be required to pay liquidated damages to Ovation in the amounts of \$5.0 million in 2010, \$10.0 million in 2011 and \$15.0 million in 2012. Also, pursuant to the supply agreement, the Company committed to making certain minimum quantity purchases of active ingredient in 2008 and 2009. As of December 31, 2008, remaining commitments related to this supply arrangement total \$4.75 million.

The Company has employment and separation agreements with certain members of its management, which provide for severance payments and payments following a termination of employment occurring after a change in control of the Company.

The Company has been involved in various claims and legal actions arising in the ordinary course of business. In the opinion of management, the ultimate disposition of these matters will not have a material effect on the Company's consolidated financial position, results of operations or liquidity.

**(21) Leases**

The Company has several leases for office, warehouse, production and research facilities and equipment. The non-cancelable lease terms for the operating leases expire at various dates between 2009 and 2021 and each agreement includes renewal options.

Future minimum lease payments, for non-cancelable operating leases with initial or remaining lease terms in excess of one year as of December 31, 2008 are (in thousands):

Year ending December 31,	Operating Leases
2009	\$ 2,296
2010	2,261
2011	2,240
2012	2,227
2013	2,066
Thereafter	11,492
Total minimum lease payments	<u>\$ 22,582</u>

Rent expense amounted to \$2.3 million, \$2.3 million and \$1.6 million, for the years ended December 31, 2008, 2007 and 2006, respectively. Total rent expense, inclusive of scheduled increases and rent holidays, is recognized on a straight-line basis over the term of the lease.

**(22) Retirement Plans**

The Company maintains a defined contribution 401(k) pension plan for substantially all of its full-time and part-time employees, as defined. The Company currently matches 50 percent of the employee's contribution of up to 6 percent of compensation, as defined. Total Company contributions for the years ended December 31, 2008, 2007 and 2006, were \$1.1 million, \$0.9 million and \$0.8 million, respectively.

In November 2003, the Board of Directors adopted the Executive Deferred Compensation Plan (the Plan) which has subsequently been amended. The Plan is intended to aid the Company in attracting and retaining key employees by providing a non-qualified funded compensation deferral vehicle. At December 31, 2008 and

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

2007, \$3.6 million and \$3.0 million of deferred compensation was included in other liabilities, respectively. Refer to Note 4 to consolidated financial statements relating to the investment of participants' assets.

**(23) Business and Geographical Segments**

The Company operates in the following three business and reportable segments:

**Products** — The Products segment performs the manufacturing, marketing and selling of pharmaceutical products for patients with cancer or other life-threatening diseases. The Company has developed or acquired four therapeutic, FDA-approved products focused primarily in oncology and other life-threatening diseases. The Company currently markets its products through its specialized U.S. sales force that calls upon specialists in oncology, hematology, infectious disease and other critical care disciplines. The Company's four proprietary marketed brands are Oncaspar, DepoCyt, Abelcet and Adagen.

**Royalties** — The Company receives royalties on the manufacture and sale of products that utilize its proprietary technology. Royalty revenues are currently derived from sales of products that use the Company's PEGylation platform, namely PEG-INTRON marketed by Schering-Plough, Macugen marketed by OSI Pharmaceuticals, Inc. and Pfizer Inc., Pegasys marketed by Hoffmann-La Roche and CIMZIA marketed by UCB Pharma.

**Contract Manufacturing** — The Company utilizes a portion of its excess manufacturing capacity to provide manufacturing services for third parties. It manufactures Abelcet for export and MYOCET, both for Cephalon France, the injectable multivitamin, MVI<sup>®</sup>, for Hospira, Inc., as well as other products. The Company's contract with Hospira, Inc. for the manufacture of MVI is scheduled to terminate effective April 30, 2010 and the Company's agreements with Cephalon for manufacture of MYOCET and Abelcet expire in January 2010 and November 2011, respectively. The Company entered into two other manufacturing agreements near the end of 2006.

The performance of each of the Company's segments is monitored by the Company's chief operating decision maker, the President and Chief Executive Officer. Segment profit (loss) is measured based on operating results, excluding investment income, interest expense and income taxes. The Company's research and development expense is considered a corporate expense until a product candidate enters Phase III clinical trials at which time related costs would be chargeable to one of the Company's operating segments. The Company does not identify or allocate property and equipment by operating segment and does not allocate depreciation to the operating segments. Operating segments do not have intersegment revenue, and accordingly, there is none to be reported.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

The following tables present segment revenue, profitability and certain asset information for the years ended December 31, 2008, 2007 and 2006 (in thousands):

Segment		Products	Royalties	Contract Manufacturing	Corporate <sup>(1)</sup>	Consolidated
Revenues	December 31, 2008	\$ 113,789	\$ 59,578	\$ 23,571	\$ —	\$ 196,938
	December 31, 2007	100,686	67,305	17,610	—	185,601
	December 31, 2006	101,024	70,562	14,067	—	185,653
Segment Profit	December 31, 2008	20,099	59,578	7,226	(83,850)	3,053
	December 31, 2007	7,992	155,971 <sup>(2)</sup>	4,362	(77,831)	90,494
	December 31, 2006	20,582	70,562	2,280	(82,924)	10,500
Assets	December 31, 2008	84,063	235	4,317	260,638	349,253
	December 31, 2007	97,485	292	7,588	314,992	420,357
	December 31, 2006	106,760	178	4,449	292,443	403,830
Amortization	December 31, 2008	12,487	—	—	—	12,487
	December 31, 2007	10,369	—	—	—	10,369
	December 31, 2006	8,144	—	—	—	8,144

<sup>(1)</sup> Corporate expenses include operating income (loss) components that are not directly attributable to an operating segment, including general and administrative expenses, exploratory and preclinical research and development expenses and treasury activities. Corporate assets consist principally of cash, short-term investments, restricted investments and cash, marketable securities, property and equipment and certain working capital items. The Company does not identify or allocate property and equipment by operating segment, and as such does not allocate depreciation to the operating segments, nor does the chief operating decision maker evaluate operating segments on these criteria. The Company does not allocate interest income, interest expenses or incomes taxes to operating segments.

<sup>(2)</sup> Royalties segment profit for the year ended December 31, 2007 includes a gain of \$88.7 million resulting from the third-quarter 2007 sale of a 25-percent interest in future royalty revenues. The subject royalties are those payable by Schering-Plough to Enzon on sales of PEG-INTRON occurring after June 30, 2007.

Following is a reconciliation of segment profit to consolidated (loss) income before income tax (in thousands):

	Year Ended December 31,		
	2008	2007	2006
Segment profit	\$ 86,903	\$ 168,325	\$ 93,424
Unallocated corporate operating expense	(83,850)	(77,831)	(82,924)
Operating income	3,053	90,494	10,500
Other corporate income and expense	(5,464)	(5,508)	11,567
(Loss) income before income tax	<u>\$ (2,411)</u>	<u>\$ 84,986</u>	<u>\$ 22,067</u>

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

Revenues consisted of the following (in thousands):

	Year Ended December 31,		
	2008	2007	2006
Product sales, net			
Oncaspar	\$ 50,044	\$ 38,711	\$ 30,881
DepoCyt	9,032	8,628	8,273
Abelcet	26,932	28,843	36,526
Adagen	27,781	24,504	25,344
Total product sales, net	113,789	100,686	101,024
Royalties	59,578	67,305	70,562
Contract manufacturing	23,571	17,610	14,067
Total revenues	<u>\$ 196,938</u>	<u>\$ 185,601</u>	<u>\$ 185,653</u>

Outside the U.S., the Company principally sells: Oncaspar in Germany, DepoCyt in Canada, Abelcet in Canada and Adagen in Europe. Information regarding revenues attributable to the U.S. and to all foreign countries collectively is provided below. The geographic classification of product sales was based upon the location of the customer. The geographic classification of all other revenues is based upon the domicile of the entity from which the revenues were earned. Following information is in thousands:

	Year Ended December 31,		
	2008	2007	2006
Revenues:			
U.S.	\$ 119,854	\$ 111,683	\$ 117,161
Europe	50,301	45,624	40,118
Other	26,783	28,294	28,374
Total revenues	<u>\$ 196,938</u>	<u>\$ 185,601</u>	<u>\$ 185,653</u>

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements — (Continued)**

**(24) Quarterly Results of Operations (Unaudited)**

The following tables present summarized unaudited quarterly financial data (in thousands, except per-share amounts). Gross profit presented in these tables is calculated as the aggregate of product sales, net and contract manufacturing revenue, less cost of product sales and contract manufacturing.

	Three Months Ended			
	March 31, 2008	June 30, 2008	September 30, 2008	December 31, 2008
Revenues:				
Product sales, net	\$ 27,429	\$ 29,206	\$ 28,912	\$ 28,242
Royalties	14,700	15,035	14,611	15,232
Contract manufacturing	6,644	6,723	5,267	4,937
Total revenues	48,773	50,964	48,790	48,411
Gross profit	17,934	18,523	19,706	19,495
Net income (loss)	<u>1,516</u>	<u>(1,745)</u>	<u>(2,020)</u>	<u>(466)</u>
Net income (loss) per common share:				
Basic	\$ 0.03	\$ (0.04)	\$ (0.05)	\$ (0.01)
Diluted	\$ 0.03	\$ (0.04)	\$ (0.05)	\$ (0.01)
Weighted average number of shares —				
Basic	44,166	44,352	44,464	44,608
Weighted average number of shares —				
Diluted	44,737	44,352	44,464	44,608

	Three Months Ended			
	March 31, 2007	June 30, 2007	September 30, 2007	December 31, 2007
Revenues:				
Product sales, net	\$ 22,649	\$ 25,019	\$ 24,874	\$ 28,144
Royalties	16,344	18,290	18,206	14,465
Contract manufacturing	2,495	5,903	3,761	5,451
Total revenues	41,488	49,212	46,841	48,060
Gross profit	13,680	15,653	14,517	19,468
Net (loss) income	<u>(2,786)</u>	<u>(1,959)</u>	<u>87,530 *</u>	<u>268</u>
Net (loss) income per common share:				
Basic	\$ (0.06)	\$ (0.04)	\$ 1.99	\$ 0.01
Diluted	\$ (0.06)	\$ (0.04)	\$ 1.23	\$ 0.01
Weighted average number of shares —				
Basic	43,862	43,884	43,925	44,039
Weighted average number of shares —				
Diluted	43,862	43,884	74,344	44,708

\* The Company sold a 25-percent interest in its PEG-INTRON royalty in August 2007, generating a gain of \$88,666.

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**

**Schedule II — Valuation and Qualifying Account  
(In thousands)**

	<b>Balance at Beginning of Period</b>	<b>Charged to Costs and Expenses</b>	<b>Additions Charged to other Accounts</b>	<b>Deductions</b>	<b>Balance at End of Period</b>
<b>Year ended December 31, 2008:</b>					
Allowance for chargebacks, returns and cash discounts	\$ 4,503	\$ —	\$ 27,387 <sup>(2)</sup>	\$ (26,956)	\$ 4,934
Allowance for doubtful accounts	280	—	—	(195)	85
<b>Year ended December 31, 2007:</b>					
Allowance for chargebacks, returns and cash discounts	\$ 5,078	\$ —	\$ 27,552 <sup>(2)</sup>	\$ (28,127)	\$ 4,503
Allowance for doubtful accounts	245	352 <sup>(1)</sup>	—	(317)	280
<b>Year ended December 31, 2006:</b>					
Allowance for chargebacks, returns and cash discounts	\$ 5,152	\$ —	\$ 30,859 <sup>(2)</sup>	\$ (30,933)	\$ 5,078
Allowance for doubtful accounts	71	245 <sup>(1)</sup>	—	(71)	245

<sup>(1)</sup> Amounts are recognized as bad debt expense.

<sup>(2)</sup> Amounts are recognized as reductions from gross sales.

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**CONFIDENTIAL TREATMENT REQUESTED**

CONFIDENTIAL TREATMENT REQUESTED: INFORMATION FOR WHICH CONFIDENTIAL TREATMENT HAS BEEN REQUESTED IS OMITTED AND IS NOTED AS FOLLOWS \*\*REDACTED\*\*. AN UNREDACTED VERSION OF THIS DOCUMENT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

*Execution Version***LICENSE AND COLLABORATION AGREEMENT**

**THIS LICENSE AND COLLABORATION AGREEMENT** (the “**Agreement**”) is entered into this **26th** day of **July 2006** (the “**Effective Date**”) by and between **Santaris Pharma A/S**, a Danish corporation having its principal place of business at Hørsholm, Denmark (“**Santaris**”), and **Enzon Pharmaceuticals, Inc.**, a Delaware corporation having its principal place of business at Bridgewater, New Jersey 08807 (“**Enzon**”). Santaris and Enzon may be referred to herein individually as a “**Party**” or collectively, as the “**Parties**”.

**BACKGROUND**

Enzon is a pharmaceutical company engaged in the discovery, development, marketing, manufacture and distribution of pharmaceutical products. Santaris is a pharmaceutical company engaged in the discovery, development and manufacture of, among other molecules, RNA antagonists for the treatment of oncology indications, and has developed RNA antagonists referred to as SPC2968 and SPC3042. Santaris and Enzon desire to enter into an arrangement pursuant to which (a) Enzon will obtain rights to develop SPC2968 and SPC3042 for commercialization in the Enzon Territory and provide data for use by Santaris in the Santaris Territory, and (b) Santaris will design and synthesize RNA antagonists directed against six (6) Targets (as defined below) selected by Enzon, and each Party will have the right to develop such antagonists and to commercialize such antagonists pursuant to the terms of this Agreement.

The Parties agree as follows:

**1. DEFINITIONS**

- 1.1 “**Abandoned Target**” shall have the meaning set forth in Section 5.8.
- 1.2 “**Accepted LNA Compound**” shall have the meaning set forth in Section 5.4.
- 1.3 “**Acquisition Transaction**” shall have the meaning set forth in Section 2.6.
- 1.4 “**Additional Targets**” shall have the meaning set forth in Section 5.2.

1.5 “**Affiliate**” means a Person that controls, is controlled by or is under common control with a Party. For the purposes of this Section, the word “control” (including, with correlative meaning, the terms “controlled by” or “under the common control with”) means the actual power, either directly or indirectly, through one or more intermediaries, to direct the management and policies of such Person, whether by ownership of at least 50% of the voting rights or other ownership interests of such Person, by contract, or otherwise.

1.6 “**Business Day**” means a day other than a Saturday, Sunday, bank or other public holiday in the state of New Jersey or, to the extent applicable to Santaris, Denmark.

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- 1.7 “**Chugai**” means Chugai Pharmaceutical Co., Ltd.
- 1.8 “**Chugai License**” means that certain License Agreement, dated as of 30 June 2000, between Chugai and Exiqon.
- 1.9 “**Claim**” shall have the meaning set forth in Section 12.1.
- 1.10 “**Collaboration Coordinator**” shall have the meaning set forth in Section 4.1.
- 1.11 “**Combination Product**” means a Product that contains a Selected LNA Compound and one or more other therapeutically active ingredients. **[\*\*Redacted\*\*]**.
- 1.12 “**Commercialize**” or “**Commercialization**” means all activities that are undertaken after approval of an MAA for a Product and that relate to the commercial marketing and sale of such Product, including advertising, marketing, promotion, distribution, and Phase IV Trials.
- 1.13 “**Competing Product**” means any pharmaceutical product, other than a Product, that contains as an active ingredient any LNA compound, protein, small molecule compound or other chemical or biological substance that specifically and directly modulates the expression of an Enzon Target.
- 1.14 “**Compound Acceptance Criteria**” shall have the meaning set forth in Section 5.4.
- 1.15 “**Compound Selection Process**” shall have the meaning set forth in Section 5.4.
- 1.16 “**Confidentiality Agreement**” means the Confidentiality Agreement between the Parties dated November 14, 2005.
- 1.17 “**Confidential Information**” means all non-public, proprietary data or information and materials received by either Party from the other Party pursuant to this Agreement or the Confidentiality Agreement, subject to the exceptions set forth in Section 9.2.
- 1.18 “**Conflict**” shall have the meaning set forth in Section 5.1.
- 1.19 “**Control**” or “**Controlled**” means, with respect to any Know-How, Development Data or other intellectual property right that a Party owns or has a license to such item or right, and has the ability to grant a license or sublicense in or to such item or right, without violating the terms of any agreement or other arrangement with any Third Party.
- 1.20 “**Control Target**” means a Target identified by the GenBank No. from the NCBI Database, or a similar recognized database, selected by Enzon to serve as a control for selecting specific LNA Compounds directed against the Additional Targets.

1.21 “**Cover**” or “**Covering**” means, on a country-by-country basis, that the manufacture, use, import, offer for sale, or sale of a Product (including any LNA Monomer or Selected LNA Compound contained therein) would infringe a Valid Claim in such country.

1.22 “**Damages**” shall have the meaning set forth in Section 12.1.

1.23 “**Develop**” or “**Development**” means the performance of all non-clinical, clinical, process and formulation development and regulatory activities of a Selected LNA Compound that are necessary or useful to obtain Regulatory Approval of a Product.

1.24 “**Development Data**” means all data generated by or for either Party in connection with the Development of a Product or otherwise compiled or submitted in any Regulatory Filing or otherwise relating to a Selected LNA Compound or Product that is Controlled at any time during the Term by either Party or any of its Affiliates, including all non-clinical, chemistry, manufacturing and control, formulation, process and clinical development and Phase IV Trial data.

1.25 “**Development Plan**” shall have the meaning set forth in Section 6.1(c).

1.26 “**Discovery Program**” means the research program conducted by the Parties under Sections 5.3 through 5.6 to identify and recommend Selected LNA Compounds.

1.27 “**Diligent Efforts**” means efforts that are not less than those efforts a Party makes with respect to other products in its portfolio (but, in any event, not less than the efforts that would be exerted by a reasonably prudent and diligent biopharmaceutical company similarly situated to such Party to accomplish similar objectives), taking into account, among other things, medical and clinical considerations, the product’s labeling (target or actual) and market potential, financial return, competitive market conditions in the therapeutic area, regulatory environment and other relevant factors at the time such efforts are due. Diligent Efforts shall apply on a Selected LNA Compound-by-Selected LNA Compound, and Product-by-Product basis, and the failure to exercise Diligent Efforts with respect to a particular Selected LNA Compound or a particular Product shall not constitute a breach of either Party’s obligation to use Diligent Efforts with respect to any other Selected LNA Compound or Product.

1.28 “**EMEA**” shall have the meaning set forth in Section 6.2(e).

1.29 “**Enzon Know-How**” means all Know-How and Inventions that (a) are Controlled by Enzon or its Affiliates as of the Effective Date or acquired or developed by or on behalf of Enzon or its Affiliates during the Term, and (b) (i) are necessary or useful for the Development, manufacture or Commercialization of LNA Monomers, oligonucleotides comprised of one or more of such LNA Monomers, Selected LNA Compounds or Products, or (ii) relate to any of the Enzon Targets and are necessary or useful for the discovery of LNA Compounds (and, in each such case, all Patents claiming any such Know How or Inventions); *excluding*, in each such case, Enzon Pegylation Technology, LNA Platform Technology and LNA Compound Patents.

1.30 “**Enzon Pegylation Know-How**” means all Know-How and Inventions that (a) are (i) Controlled by Enzon or its Affiliates as of the Effective Date or acquired or developed or conceived or reduced to practice by or on behalf of Enzon or its Affiliates during the Term or (ii) developed, conceived or reduced to practice by Santaris or jointly by the Parties or their Affiliates during the course of performing activities under this Agreement, and (b) comprise or relate to Pegylation but that are not specific to any Enzon Target, Selected LNA Compound or Product.

1.31 “**Enzon Pegylation Patents**” means any Patents that claim any Inventions included in Enzon Pegylation Know How.

1.32 “**Enzon Pegylation Technology**” means the Enzon Pegylation Know-How and the Enzon Pegylation Patents.

1.33 “**Enzon Quarter**” means each of the three (3) month periods commencing January 1, April 1, July 1 and October 1 of each calendar year.

1.34 “**Enzon Target**” means the Survivin Target, the Hif-1± Target, and any Additional Target for which Enzon has paid Santaris the milestone payment set forth in Section 7.2; *provided*, however, that a Target will cease to be an Enzon Target if Enzon’s rights under this Agreement to all Selected LNA Compounds modulating protein synthesis by such Target have been terminated for any reason.

1.35 “**Enzon Technology**” means the Enzon Know-How and the Enzon Pegylation Technology.

1.36 “**Enzon Territory**” means all countries and other geographic territories of the world except the Santaris Territory; *provided*, that Japan shall be included in the Enzon Territory subject to the terms of Section 3.1.

1.37 “**Exiqon**” means Exiqon A/S.

1.38 “**Exiqon License**” means that certain License Agreement between Exiqon and Santaris (as successor-in-interest to Cureon A/S) date April 10, 2003, as amended by an agreement dated April 29, 2005, and extended by the agreements dated November 15, 2005 and June 20, 2006.

1.39 “**FDA**” means the United States Food and Drug Administration, or any successor federal agency thereto.

1.40 “**Field**” means use in humans or animals for the prevention, treatment, cure, control or mitigation of disease or other medical condition, and specifically excludes all uses excluded, as of the Effective Date, under the grants to Santaris under the Third Party Licenses.

1.41 “**Good Clinical Practices**” or “**GCP**” means current Good Clinical Practices as stated in any Laws or regulatory guidance from time to time, including EC Directive 2001/20/EC, as amended, and 21 CFR Parts 50, 56, and 312 *et seq.*, and all FDA and ICH guidelines, including the ICH Consolidated Guidelines on Good Clinical Practices.

1.42 “**Good Laboratory Practices**” or “**GLP**” means current Good Laboratory Practices as stated in any Laws or regulatory guidance from time to time, including EC Directives 87/18 EEC, 88/320/EEC, and 1999/11/EC and 21 CFR § 58 and all applicable FDA and ICH guidelines.

1.43 “**Good Manufacturing Practices**” or “**GMP**” means current Good Manufacturing Practices and standards as provided for (and as amended from time to time) in European Community Directive 91/356/EEC (Principles and Guidelines of Good Manufacturing Practice for Medicinal Products) and in the Current Good Manufacturing Practice Regulations of the United States Code of Federal Regulations (21 CFR §§ 210-211) in relation to the production of pharmaceutical intermediates and active pharmaceutical ingredients, as interpreted by ICH Harmonized Tripartite Guideline ICH Q7A, Good Manufacturing Practice Guide for Active Pharmaceutical Ingredients.

1.44 “**Governmental Authority**” means any court, agency, department or other instrumentality of any foreign, federal, state, county, city or other political subdivision (including any supra-national agency such as in the European Union).

1.45 “**Hif-1 $\alpha$  Target**” means the human Hif-1 $\pm$  gene [**\*\*Redacted\*\***].

1.46 “**ICH**” shall mean the International Conference on Harmonization.

1.47 “**IND**” means an Investigational New Drug Application filed with the FDA or the equivalent clinical trial application or filing filed with any equivalent agency or Governmental Authority outside of the United States necessary to commence human clinical trials in such jurisdiction, and including all regulations at 21 CFR § 312 et. seq. and equivalent foreign regulations.

1.48 “**Indemnified Party**” shall have the meaning set forth in Section 12.4.

1.49 “**Indemnifying Party**” shall have the meaning set forth in Section 12.4.

1.50 “**Invention**” means all inventions, discoveries and improvements (whether or not patentable) that are (a) Controlled by either Party or its Affiliates as of the Effective Date or (b) acquired (through license or otherwise) or developed, conceived or reduced to practice during the Term by any employees, consultants or contractors of either Party or any of its Affiliates (or other persons obligated to assign such inventions, discoveries and improvements to a Party or one of its Affiliates).

1.51 “**Joint Discovery Project Team**” or “**JDPT**” shall have the meaning set forth in Section 4.3.

1.52 “**Joint Steering Committee**” or “**JSC**” shall have the meaning set forth in Section 4.1.

1.53 “**Know-How**” means any non-public, proprietary information and other data, instructions, processes, methods, formulae, materials, expert opinions, results, databases, inventions, practices, techniques, specifications, and know-how, including pharmacological,

biological, chemical, biochemical, toxicological, pharmaceutical, physical, analytical, clinical, safety, manufacturing, quality control data, and stability data.

1.54 “**Launch**” means the first shipment of a Product in commercial quantities for commercial sale by Enzon, its Affiliates or its Marketing Sublicensees to an unaffiliated Third Party in a country after receipt by Enzon of the first Regulatory Approval for such Product in such country.

1.55 “**Law**” or “**Laws**” means all applicable laws, statutes, rules, regulations, orders, codes, judgments and/or ordinances of any Governmental Authority, or listing authority (e.g., New York Stock Exchange, Nasdaq National Stock Market or Copenhagen Stock Exchange).

1.56 “**LNA Compound**” means any oligonucleotide that is comprised of one or more LNA Monomers that selectively modulates protein synthesis by an Enzon Target.

1.57 “**LNA Compound Patent**” means any Patent claiming the composition of matter of an LNA Compound or use of an LNA Compound for a medical use, including the Patents listed on **Schedule 1.57**.

1.58 “**LNA Monomer**” means any of the [\*\*Redacted\*\*] compositions claimed under any of the [\*\*Redacted\*\*].

1.59 “**LNA Platform**” means the use of LNA Monomers and locked nucleic acid single-stranded chains of nucleotides to target and modulate specific protein expressions within a cell and the methods of design, selection, identification, synthesis, manufacture and screening of such nucleotides and LNA Monomers.

1.60 “**LNA Platform Know-How**” means all Know-How and Inventions that (a) are (i) Controlled by Santaris or its Affiliates as of the Effective Date or acquired or developed or conceived or reduced to practice by or on behalf of Santaris or its Affiliates during the Term or (ii) developed, conceived or reduced to practice by Enzon or jointly by the Parties or their Affiliates during the course of performing activities under this Agreement, and (b) comprise or relate to LNA Platform but that are not specific to any Enzon Target, Selected LNA Compound or Product.

1.61 “**LNA Platform Patents**” means any Patents that claim any Inventions included in LNA Platform Know How, including the existing Patents listed on **Schedule 1.61**, but excluding LNA Compound Patents.

1.62 “**LNA Platform Technology**” means the LNA Platform Know-How and the LNA Platform Patents.

1.63 “**MAA**” means a new drug application, marketing authorization application, notice of submission, biologic license application or other application seeking approval from a Regulatory Authority to sell a Product in a country or other geographic territory.

1.64 “**Marketing Sublicensee**” means a Third Party to whom Enzon grants a sublicense under any rights licensed hereunder to distribute, promote the sale of or sell the

Products, or otherwise grants rights to distribute, promote or sell the Products (other than wholesalers and physical distributors).

1.65 “**Net Sales**” means:

(a) with respect to each Product, the amount invoiced by Enzon, its Affiliates or its Marketing Sublicensees, for sales of Products to Third Parties, and less the following deductions: (i) sales returns and allowances actually paid, granted or accrued, including trade, quantity and cash discounts; (ii) credits and refunds in connection with price adjustments, billing errors, rejected goods, damaged or defective goods, recalls, and returns actually paid, granted or accrued; (iii) rebates, chargeback rebates, reimbursements or similar payments, including any fees granted or given to wholesalers or other distributors, buying groups, health care insurance carriers, governmental or regulatory authority, government-subsidized program or managed care organization or other institutions, and adjustments arising from consumer discount programs actually paid, granted or accrued; and (iv) to the extent reflected in such invoice, customs or excise duties, sales tax, consumption tax, value-added tax, and other taxes (except income taxes) or duties relating to sales, and freight and insurance (to the extent that Enzon bears the cost of freight and insurance for such a Product).

(b) Net Sales of any Product that is sold as a Combination Product in a particular country will be determined by multiplying the total Net Sales of the Combination Product by the fraction  $A/(A+B)$ , where A is the average invoice price per unit dose of the Product when sold separately in finished form in such country and B is the sum of the average invoice prices of the products containing the other active ingredients in the Combination Product when sold separately in finished form in such country. If such average invoice price cannot be determined for both the Product and the product(s) containing such other ingredient(s), the Parties will negotiate in good faith regarding the calculation of Net Sales for the applicable Combination Product, based on the relative value contributed by each component.

(c) Each of the foregoing deductions shall be determined as incurred in the ordinary course of business in type and amount consistent with good industry practice and in accordance with generally accepted accounting principles in the United States on a basis consistent with Enzon’s audited consolidated financial statements. All deductions for payments in respect of sales to any Governmental Authority, any government-subsidized program, or any managed care or similar organization, which deductions apply collectively to multiple pharmaceutical products, shall be fairly allocated to the amounts invoiced for Products.

1.66 “**Nominated Target**” shall have the meaning set forth in Section 5.1.

1.67 “**Patent**” means: (a) an issued, unexpired patent (including inventor’s certificate), including any substitution, extension, supplementary protection certificates, registration, confirmation, reissue, reexamination, renewal or any like filing thereof; or (b) any pending patent application, including any continuation, division or continuation-in-part thereof and any provisional application.

1.68 **“Pegylation”** with a correlative meaning for **“Pegylated,”** means the conjugation (covalent chemical bonding) of PEG (including conjugation through linking groups) with or to other materials, including single chain antibodies. “Pegylation” will include the synthesis, derivatization, characterization, and modification of PEG for such purposes, together with the synthesis, derivatization, characterization, and modification of the raw materials and intermediates for the manufacture of PEG reagents or products incorporating such PEG reagents by means of conjugation, and all methods of making and using each and all of the foregoing. As used in this definition, **“PEG”** means polyethylene glycol and derivatives thereof, including methoxy-polyethylene glycol.

1.69 **“Pegylated Product”** means a pharmaceutical product that contains a Pegylated Selected LNA Compound.

1.70 **“Pegylated Selected LNA Compound”** means a Pegylated form of a Selected LNA Compound.

1.71 **“Person”** means an individual, corporation, partnership, company, joint venture, unincorporated organization, limited liability company or partnership, sole proprietorship, association, bank, trust company or trust, whether or not legal entities, or any governmental entity or agency or political subdivision thereof.

1.72 **“Phase II Trial”** means a clinical trial of a Product on patients, the principal purpose of which is to establish clinical proof of principle and to obtain sufficient information about such Product’s safety and efficacy to permit the design of further clinical trials, and that would satisfy the requirements of 21 CFR § 312.21(b).

1.73 **“Phase III Trial”** means a clinical trial that provides for a pivotal human clinical trial of a Product, which trial is designed to: (a) establish that a Product is safe and efficacious for its intended use; (b) define warnings, precautions and adverse reactions that are associated with the Product in the dosage range to be prescribed; (c) support Regulatory Approval of such Product; and (d) that would satisfy the requirements of 21 CFR § 312.21(c).

1.74 **“Phase IV Trial”** means clinical trial of a Product commenced in a particular country after Regulatory Approval for such Product in such country in order to (a) support Commercialization of the Product, or (b) fulfill a post-approval study commitment or undertaking imposed by the applicable Regulatory Authority in such country.

1.75 **“Product”** means any pharmaceutical product that contains a Selected LNA Compound. Product shall include any Pegylated Product.

1.76 **“Product Trademarks”** means one or more trademarks or logos that are used for the marketing and sale of a Product. Product Trademark does not include the logo or tradename of either Party or the trademark or tradename of another product sold by either Party.

1.77 **“Regulatory Approval”** means any and all approvals (including supplements, amendments, pre- and post-approvals, and pricing and reimbursement approvals even if such pricing and reimbursement approvals are not legally required to sell the applicable Product),

licenses, registrations or authorizations of any national, supra-national (e.g., the European Commission or the Council of the European Union), regional, state or local regulatory agency, department, bureau, commission, council or other governmental entity, that are necessary (except for pricing and reimbursement approvals, which need not be necessary) for the manufacture, distribution, use or sale of a Product in a regulatory jurisdiction.

1.78 “**Regulatory Authority**” means any Governmental Authority with responsibility for granting any licenses or approvals necessary for the marketing and sale of pharmaceutical products, including the FDA and any equivalent regulatory authority of countries of the European Union and Japan, and where applicable any ethics committee or any equivalent review board.

1.79 “**Regulatory Filing**” means a MAA, IND any other filings required by Regulatory Authorities relating to the Development or Commercialization of any Product.

1.80 “**Representatives**” shall have the meaning set forth in Section 12.1.

1.81 “**Reservation Period**” shall have the meaning set forth in Section 5.2.

1.82 “**Royalty Term**” means on a country-by-country and Product-by-Product basis, the period ending upon the last to expire Valid Claim of an LNA Platform Patent or an LNA Compound Patent, in each case, Covering such Product in the country of sale of such Product, in any event, with respect to each Product, not to exceed twenty one (21) years from the first filing of the first LNA Compound Patent covering the Selected LNA Compound contained in such Product. With respect to the Survivin Target, US Provisional Patent Application No. 60/446372, filed on February 10, 2003, is such LNA Compound Patent and in connection therewith the Royalty Term shall expire no later than February 10, 2024, and with respect to the Hif-1a Target, US Provisional Patent Application No. 60/370126, filed on April 5, 2002, is such first LNA Compound Patent and in connection therewith the Royalty Term shall expire no later than April 5, 2023.

1.83 “**Santaris Know-How**” means all Know-How and Inventions that are (a) Controlled by Santaris or its Affiliates as of the Effective Date or acquired or developed by or on behalf of Santaris or its Affiliates during the Term, and (b) necessary or useful for the Development, manufacture or Commercialization of LNA Monomers contained in Selected LNA Compounds, Selected LNA Compounds or Products (and, in each such case, all Patents claiming any such Know How or Inventions); *excluding*, in each such case, Enzon Pegylation Technology, LNA Platform Technology and LNA Compound Patents.

1.84 “**Santaris Technology**” means the Santaris Know-How and the LNA Platform Technology.

1.85 “**Santaris Territory**” means the countries comprising Europe that are listed in **Schedule 1.85**.

1.86 “**Selected LNA Compounds**” means SPC2968, SPC3042 and such Accepted LNA Compounds that are selected by Enzon for Development under Section 5.5, and any [\*\*Redacted\*\*] of such LNA Compound.

1.87 “**SPC 2968**” means the oligonucleotide now being developed by Santaris as an antagonist of the Hif-1 $\alpha$  Target and which is further described in **Schedule 1.87**.

1.88 “**SPC 3042**” means the oligonucleotide now being developed by Santaris as an antagonist of the Survivin Target and which is further described in **Schedule 1.88**.

1.89 “**Sponsoring Party**” shall have the meaning set forth in Section 6.1(d)(iii).

1.90 “**Survivin Target**” means the human Survivin gene [**\*\*Redacted\*\***].

1.91 “**Target**” means the pre-mRNA and any mature mRNAs arising from a human gene or any of its naturally occurring allelic variants.

1.92 “**Target Submission Materials**” means, in respect of a Target submitted to Santaris, the following information: (a) the Genebank accession number for the Target, and an electronic file with the DNA sequence; (b) information on known allelic forms of the gene; (c) information on known mRNA splice-variants; (d) instructions to Santaris as to how information under (b) and (c) should be taken into account in the process of designing LNA oligonucleotides against the Target; (e) the Genebank accession number for the Control Target, and an electronic file with the DNA sequence; (f) any information known or in the possession of Enzon or its Affiliates in regard to cell lines that express both the Target and the Control Target and PCR protocols for amplifying said Target and Control Target; (g) information on any patents and other intellectual property rights held by Enzon or a Third Party that Enzon believes, in its reasonable judgment, should be taken into account in the design of the LNA oligonucleotide against the Target; and (h) available information, if any, concerning the expected clinical indications and any market analysis for Products for such Target.

1.93 “**Term**” shall have the meaning set forth in Section 10.1.

1.94 “**Third Party**” means a person or entity other than Enzon, Santaris or an Affiliate of either of them.

1.95 “**Third Party Claim**” shall have the meaning set forth in Section 12.4.

1.96 “**Third Party Licenses**” means the license agreements entered into by Santaris that are listed on **Schedule 1.96**.

1.97 “**University of Copenhagen License**” means that certain agreement between Santaris and the Laboratory of Experimental Oncology, University of Copenhagen, dated August 23, 2004.

1.98 “**Valid Claim**” means a claim of any issued, unexpired LNA Platform Patent Controlled by Santaris or its Affiliates or an LNA Compound Patent that has not been dedicated to the public, disclaimed, abandoned or held invalid or unenforceable by a court or other body of competent jurisdiction in an unappealed or unappealable decision, and that has not been explicitly disclaimed, or admitted by Santaris in writing to be invalid or unenforceable or of a scope not covering Products through reissue, disclaimer or otherwise.

## 2. LICENSES AND RELATED RIGHTS

**2.1 Licenses to Enzon.** Subject to the terms of this Agreement, Santaris grants to Enzon under the Santaris Technology, Development Data, Regulatory Approvals and Santaris' rights in any LNA Compound Patents the following:

(a) the exclusive (even as to Santaris) license, including the right to sublicense, to Develop, import, offer for sale, sell and otherwise Commercialize Selected LNA Compounds and Products in the Field in the Enzon Territory;

(b) the exclusive (even as to Santaris) license, including the right to sublicense, to manufacture or have manufactured anywhere in the world Selected LNA Compounds and Products for the sole purpose of selling, offering for sale and otherwise Commercializing such Selected LNA Compounds and Products in the Enzon Territory; Enzon may so manufacture such Selected LNA Compounds and Products only from LNA Monomers supplied by Santaris (or a Third Party designated by Santaris) or manufactured by Enzon pursuant to the license granted under Section 2.1(c); and

(c) the exclusive (except as to Santaris, its Affiliates and licensees and each of their contractors) license, without the right to sublicense, to manufacture anywhere in the world LNA Monomers for use in Selected LNA Compounds.

**2.2 Licenses to Santaris.** Subject to the terms of this Agreement, Enzon grants to Santaris under the Enzon Technology, Development Data, Regulatory Approvals and Enzon's rights in any LNA Compound Patents the following royalty-free licenses:

(a) the exclusive (even as to Enzon) license, including the right to sublicense, to Develop, import, offer for sale, sell and otherwise Commercialize Selected LNA Compounds and Products in the Field in the Santaris Territory; *provided*, that, in each such case, the license grant shall not include the Enzon Pegylation Technology unless and until Enzon elects, in its sole discretion, to Pegylate a Selected LNA Compound and/or Product pursuant to Section 6.1(d)(i), and then the license to the Enzon Pegylation Technology shall only be with respect to such Pegylated Selected LNA Compound and/or Pegylated Product;

(b) the exclusive (even as to Enzon) license, with the right to sublicense, to manufacture anywhere in the world Selected LNA Compounds and Products (other than Pegylated Selected LNA Compounds and Pegylated Products) for the sole purpose of selling, offering for sale and otherwise Commercializing such Selected LNA Compounds and Products in the Santaris Territory;

(c) the exclusive license, without the right to sublicense, to manufacture anywhere in the world Pegylated Selected LNA Compounds and Pegylated Products for the sole purpose of selling, offering for sale and otherwise Commercializing such Pegylated Selected LNA Compounds and Pegylated Products in the Santaris Territory; *provided*, that, in each such case, the license grant shall not include the Enzon Pegylation Technology unless and until Enzon elects, in its sole discretion, to Pegylate a Selected LNA Compound and/or Product pursuant to Section 6.1(d)(i), and then the license to the Enzon Pegylation Technology

shall only be with respect to such Pegylated Selected LNA Compound and/or Pegylated Product; and

(d) the perpetual, exclusive (except as granted to Enzon pursuant to Section 2.1(c)) license, including the right to sublicense, to manufacture anywhere in the world LNA Monomers and oligonucleotides comprised of one or more of such LNA Monomers, and to develop, use, import, sell and otherwise commercialize anywhere in the world such LNA Monomers and such oligonucleotides; *provided*, that such license shall not include any rights under any Enzon Pegylation Technology.

The licenses granted to Santaris under paragraphs (a), (b) and (c) above are not subject to expiration or termination for any reason, except to the extent Enzon terminates this Agreement under Section 10.3 or terminates such licenses under Section 10.4(c)(ii); *provided*, that upon expiration of the LNA Compound Patent claiming a Product in a country in the Santaris Territory, the licenses granted under Sections 2.2(a), (b) and (c) in respect of such country and Product shall convert to perpetual, non-exclusive licenses.

**2.3 Rights in Bankruptcy.** All rights and licenses granted under or pursuant to this Agreement by the Parties are, and will otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code, licenses of rights to “intellectual property” as defined under Section 101 of the United States Bankruptcy Code except as may otherwise be required by any provision under Danish insolvency Laws. The Parties agree that the Parties, as licensees of such rights under this Agreement, will retain and may fully exercise all of their rights and elections under the United States Bankruptcy Code to the extent not otherwise mandatorily provided for under Danish insolvency Laws. The Parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against a Party under the United States Bankruptcy Code, or commencement of insolvency proceeding by or against a Party under the Danish Bankruptcy Act as the case may be, the Party hereto that is not a Party to such proceeding will be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property and all embodiments of such intellectual property, which, if not already in the non-subject Party’s possession, will be promptly delivered to it (a) upon any such commencement of a bankruptcy proceeding upon the non-subject Party’s written request therefore, unless the Party subject to such proceeding continues to perform all of its obligations under this Agreement or (b) if not delivered under clause (a) above, following the rejection of this Agreement by or on behalf of the Party subject to such proceeding upon written request therefore by the non-subject Party. Santaris agrees not to interfere with Enzon’s exercise under any bankruptcy code of rights and licenses to intellectual property licensed hereunder and embodiments thereof in accordance with this Agreement and agrees to use commercially reasonable efforts to assist Enzon to obtain such intellectual property and embodiments thereof in the possession or control of Third Parties as reasonably necessary or useful for Enzon to exercise such rights and licenses in accordance with this Agreement. The Parties hereto acknowledge and agree that all payments by Enzon to Santaris hereunder other than the payments pursuant to Article 7 do not constitute royalties within the meaning of United States Bankruptcy Code §365(n).

## 2.4 Sublicenses.

(a) **Enzon.** Enzon may sublicense the rights granted under Sections 2.1(a) and 2.1(b) without the prior written consent of Santaris; *provided*, that (a) in the case of each such sublicense, (i) Enzon shall be liable to Santaris as if Enzon is exercising such sublicensed rights itself under this Agreement, including all payment, diligence, access to Development Data and other information, rights in Know-How and other intellectual property rights and reporting obligations; and (ii) Enzon shall provide all reasonable assurances that its sublicensees comply with confidentiality, indemnity, reporting, audit rights, access to data (including Development Data and regulatory filings), and information obligations comparable to those set forth in this Agreement; and (b) in the case of a sublicense to sell the Product in the United States or Japan, such Marketing Sublicensees shall possess such capabilities, personnel and other resources and experience as may be required to allow Enzon to satisfy its obligations hereunder to use Diligent Efforts to Commercialize such Product in such country.

(b) **Santaris.** Santaris may sublicense the rights granted under Section 2.2(a), 2.2(b) and 2.2(d) without the prior written consent of Enzon; *provided*, that, in the case of each such sublicense, (i) Santaris shall be liable to Enzon as if Santaris is exercising such sublicensed rights itself under this Agreement, including access to Development Data and other information, rights in Know-How and other intellectual property rights and reporting obligations; and (ii) Santaris shall provide all reasonable assurances that its sublicensees comply with confidentiality, indemnity, reporting, access to data (including Development Data and regulatory filings), and information obligations comparable to those set forth in this Agreement.

(c) **Notice.** Each Party shall provide written notice and copy of each license or sublicense relating to this Agreement, a Selected LNA Compound and/or a Product promptly after execution of any such license or sublicense agreement; *provided*, that the terms that do not relate to the licensed or sublicensed rights relating to this Agreement, Selected LNA Compound and/or Product (including such terms referred to in paragraph (a) and (b) above) and the financial terms therein may be redacted. All sublicenses granted in violation of this Section 2.4 are void.

**2.5 Exclusivity.** During the conduct of the Discovery Program and the Royalty Term in each country, neither Enzon and its Affiliates nor Santaris and its Affiliates shall, except pursuant to this Agreement, directly or indirectly, by itself or with any Third Party, develop, manufacture commercial quantities of, promote the sale of or sell in such country any Competing Product; *provided*, that after the **[\*\*Redacted\*\*]** anniversary of the First Commercial Sale of a Product and subject to the licenses granted hereunder, each Party and its Affiliates may conduct research and development activities with respect to the Enzon Target of such Product. For the avoidance of doubt, once all of Enzon's rights under this Agreement to all Selected LNA Compounds modulating protein synthesis by an Enzon Target have been terminated for any reason, such Target shall deemed no longer to be an Enzon Target.

**2.6 Acquisition of Competing Product.** Notwithstanding the provisions of Section 2.5, which provisions shall not be deemed breached as a result of an acquisition or merger described in this Section 2.6 (unless such acquisition or merger involves a Third Party whose sole pharmaceutical product is a Competing Product), if Enzon acquires a Competing Product through an acquisition of the whole or substantially the whole of the business or assets

of another Person or through a merger with another Person (each, an “**Acquisition Transaction**”), then Enzon shall, within ninety (90) days from the date of the closing of such Acquisition Transaction, notify Santaris of such Acquisition Transaction and as to whether Enzon (i) is required by a Governmental Authority to, or elects to, divest its right to develop or commercialize such Competing Product or (ii) elects to retain such Competing Product. If Enzon is required or elects to divest its interest in such Competing Product, then Enzon shall use reasonable efforts to identify a Third Party purchaser to whom Enzon will divest its interest in such Competing Product and to enter into a definitive agreement with such Third Party for such divestiture as soon as reasonably practicable under the circumstances; *provided*, however, that it is understood that nothing shall limit Enzon’s right to receive licensing fees, royalty payments, or any other form of compensation from such Third Party. If Enzon fails to enter into a definitive agreement with a Third Party to divest such Competing Product within **[\*\*Redacted\*\*]** after the closing of the acquisition or merger for which Enzon has provided Santaris with notice, or if Enzon elects not to divest such Competing Product, then Enzon will pay royalties to Santaris on **[\*\*Redacted\*\*]** as though such product were a Product.

**2.7 No Other Rights.** Except as specifically provided herein, no license is granted under this Agreement by either Party to the other Party, either expressly or by implication, under any trademarks, patent rights, information, know-how, or other intellectual property right owned or Controlled by such Party.

**2.8 Exchange of Information.** Promptly after execution of this Agreement, the Parties shall establish a procedure and timeline for the exchange of Santaris Technology and Enzon Technology, including from time to time throughout the Term newly-developed or acquired Santaris Technology and Enzon Technology, to the extent reasonable in connection with each Party’s performance of its obligations and exercise of its rights hereunder.

### 3. THIRD PARTY LICENSES

**3.1 Exiqon/Chugai.** Enzon acknowledges that Santaris, as a sublicensee through Exiqon under the Chugai License, is subject to an obligation in respect of rights to commercialize the Products in Japan **[\*\*Redacted\*\*]**:

**[\*\*Redacted\*\*]**

**[\*\*Redacted\*\*]**.

**3.2 Compliance.** Each of the licenses granted to Enzon under the Santaris Technology licensed to Santaris under Third Party Licenses is subject to (a) the rights reserved under one or more of such Third Party Licenses, including non-exclusive licenses to use for internal, non-commercial research purposes and the non-exclusive licenses expressly described therein and excluded from the grants to Santaris; and (b) the other terms and conditions of such Third Party Licenses that are expressly required to apply to a sublicense thereunder, as contained in the copies of such Third Party Licenses provided to Enzon prior to the date hereof.

#### 4. COLLABORATION GOVERNANCE

**4.1 Joint Steering Committee.** The Parties shall establish a Joint Steering Committee or “**JSC**”, which shall be comprised of six (6) members, with three (3) representatives designated by each Party. Members of the JSC may be represented at any meeting by a designee appointed by such member for such meeting. Each Party shall be free to change its representative members on notice to the other Party. One of each Party’s representatives on the JSC shall be designated by such Party a “**Collaboration Coordinator**”.

**4.2 Project Teams.** Enzon shall establish project teams for the Development of each of SPC2968 and SPC3042 and each Additional Target. In order to facilitate the sharing of information between Enzon and Santaris, each of Enzon’s internal project teams shall endeavor to meet on at least a monthly basis, and up to three (3) representatives of Santaris will be invited to participate telephonically or in person in such Enzon project team meetings.

**4.3 Joint Discovery Project Team.** The Parties shall establish a “**Joint Discovery Project Team**” or “**JDPT**”, comprised of two (2) representatives of each Party, which shall be a subcommittee of the JSC and report to it. The JDPT shall be responsible for monitoring, facilitating and coordinating the Discovery Program and shall organize such meetings as are appropriate and necessary between the Parties to coordinate and complete the Discovery Program successfully. Each Party may designate one of its representatives on the JDPT also to be a representative member of the JSC.

**4.4 Function of Joint Steering Committee.** The JSC shall be responsible for reviewing and discussing: (i) past and current material Development activities, and (ii) as appropriate, future Development activities in the Santaris Territory and the Enzon Territory for Products. The JSC shall have no decision-making authority. Among other things, the JSC may:

- (a) review each Party’s pre-clinical and clinical Development Plans from time to time; and review the progress made in the Development of SPC2968, SPC3042, and other Selected LNA Compounds;
- (b) foster the collaborative relationship between the Parties;
- (c) facilitate all required technology transfer;
- (d) review scientific publications and public scientific presentations relating to the Products;
- (e) such other matters as the Parties may assign to the JSC from time to time;
- (f) monitor progress of the Discovery Program and timely transfer of LNA Compounds and pre-clinical development; and
- (g) attempt to resolve all disputes between the Parties as provided in Section 13.1 but subject to Section 10.4(c)(ii) .

**4.5 Meetings of the JSC.** The JSC shall meet on an approximately quarterly schedule, either by telephone conference, videoconference, or in person. In person meetings will take place at alternating sites – Bridgewater or Piscataway, New Jersey (USA) and Hørsholm,

Denmark, unless otherwise agreed upon by the Parties. Enzon shall serve as the “host” of the first JSC meeting, and the role of host will alternate thereafter between the Parties. The JSC meetings will be convened and chaired by the Collaboration Coordinator of the Party that is the host of the meeting, and such individual shall be responsible for all minutes. Other representatives of either Party may also attend any of such meetings. The JSC shall keep accurate minutes of its meetings, including all proposals or actions recommended or taken. Drafts of the minutes shall be delivered to the other Party’s Collaboration Coordinator promptly after the meeting. The non-hosting Party’s Collaboration Coordinator shall approve such minutes or state his/her objections in writing within five (5) days following delivery. The Collaboration Coordinators shall meet or engage in telephone or video conferences as necessary and appropriate and at the reasonable request of either Party.

## 5. TARGET SELECTION AND DISCOVERY PROGRAM

### 5.1 Enzon Right to Submit Targets; Target Submissions.

(a) Within three (3) Business Days after the Effective Date, Enzon shall nominate in writing to Santaris [\*\*Redacted\*\*] Targets (“**Nominated Targets**”) for the Discovery Program and provide the Target Submission Materials specified in clause (a) of the definition thereof for each such Target and confirm that Enzon is not a party to any contract that would prevent either Party from exercising any of the rights granted hereunder with respect to such Target. Within three (3) Business Days after such submission, Santaris shall notify Enzon in writing if Santaris opposes the nomination of any of the Nominated Targets on grounds that such Nominated Target is subject to a previously existing active Santaris internal research program or a previously existing written agreement with a Third Party that would prevent Santaris from granting rights thereto (in each case, a “**Conflict**”). If Santaris does not so notify Enzon that there is a Conflict with any of the Nominated Targets within such three (3) Business Day period, then each Nominated Target shall be deemed to be confirmed and accepted by Santaris. If Santaris does so notify Enzon that there is a Conflict with any such Nominated Target within such three (3) Business Day period, then such opposed Nominated Target shall be replaced by a new Nominated Target designated by Enzon in writing to Santaris within five (5) Business Days after notice of such Conflict (or within five (5) Business Days after the confirmation by an independent law firm of such Conflict as described below). Within three (3) Business Days after the designation of any replacement Nominated Target, Santaris shall notify Enzon in writing if Santaris opposes the nomination of such replacement Nominated Target on the grounds that a Conflict exists, and the procedures of the two immediately preceding sentences shall apply with respect to such replacement Nominated Target. Such procedures shall continue to apply until there are [\*\*Redacted\*\*] accepted and confirmed Nominated Targets. Promptly after acceptance and confirmation of each Nominated Target, Enzon shall provide to Santaris the applicable Target Submission Materials that were not previously provided.

(b) Enzon shall have the right to request that an independent U.S. law firm selected by Enzon and reasonably acceptable to Santaris confirm the existence of the Conflict. Such law firm shall not have any current or prior representation of either Party. The Parties shall use their commercially reasonable efforts to engage such law firm within three (3) Business Days after such request. Such request must be made by Enzon in writing to Santaris

within three (3) Business Days after notice by Santaris to Enzon of such Conflict. Santaris shall provide as promptly as practicable (but in no event later than the five (5) Business Days) to such law firm such records and documentation as may reasonably be required for such law firm to confirm that an appropriate basis for the Conflict exists. Such law firm shall make its determination as to whether a Conflict exists as promptly as practicable after the receipt of such records and documentation. If such law firm determines that no Conflict exists, then such Nominated Target shall be deemed confirmed and accepted by Santaris. The determination of such law firm shall be conclusive and binding on the Parties. The fees of such law firm shall be borne equally by the Parties.

## 5.2 Target Reservation.

(a) From the date a Nominated Target is confirmed and accepted up to and including the day that is **[\*\*Redacted\*\*]** days after the Effective Date (the “**Reservation Period**”), Santaris will not grant to any Third Party any rights to such Nominated Target, or otherwise enter into any agreement or arrangement that would prevent Santaris from granting exclusive rights to any such Nominated Target to Enzon. On or prior to the last day of the Reservation Period, Enzon shall designate six (6) Targets for generation and delivery of LNA Compounds (the “**Additional Targets**”) and shall make the payment referred to in Section 7.2. Such Additional Targets may be selected from the confirmed and accepted Nominated Targets or from any other Targets; *provided* that such other Targets are not opposed by Santaris in writing within three (3) Business Days after such designation as a result of a Conflict; and *provided*, further, however, Santaris will be free to grant to Third Parties rights to any Target other than the **[\*\*Redacted\*\*]** confirmed and accepted Nominated Targets during the Reservation Period.

(b) Enzon shall only designate Additional Targets for which it has conducted a worldwide analysis of the intellectual property relating to the freedom to operate with respect to such Additional Target and for which, in Enzon’s sole discretion, such analysis reflects that there exists an acceptable freedom to operate that is not disproportionately adverse in the Santaris Territory as compared to the Enzon Territory. Enzon shall also disclose to Santaris a summary of the results of such analysis. Santaris hereby acknowledges and agrees that (i) such analysis will be provided only for Santaris’s convenience and none of Santaris or its Affiliates, licensees or contractors shall be entitled to rely upon such analysis for any other purpose, (ii) neither Enzon nor any of its Affiliates makes any representations or warranties as to the accuracy, completeness or sufficiency of the analysis, and (iii) neither Enzon nor any of its Affiliates shall have any liability (whether in contract, in equity, in tort or otherwise) to Santaris or its Affiliates, licensees or contractors related to such analysis. Similarly, Enzon hereby acknowledges and agrees that (A) it assumes sole responsibility for designating any Additional Target, (B) neither Santaris nor any of its Affiliates makes any representations or warranties as to whether the use of any Additional Target is free of any patent or other intellectual property rights of Third Parties, and (C) neither Santaris nor any of its Affiliates shall have any liability (whether in contract, in equity, in tort or otherwise) to Enzon or its Affiliates, licensees or contractors related to the use of any Additional Target. If at the end of the Reservation Period, Enzon designates an Additional Target that was not one of the Nominated Targets and as a result of a Conflict Santaris is unable to accept such Additional Target, Enzon shall have an additional fifty (50) days to designate an Additional Target that is

not subject to a Conflict. After the expiration of 150 days after the Effective Date, Enzon shall have no further rights to designate Additional Targets without the consent of Santaris.

**5.3 Generation and Delivery of LNA Compounds.** Following the designation of the Additional Targets, Santaris shall then, at its sole cost and expense, use its Diligent Efforts to design, identify, synthesize, screen and select in cell culture LNA Compounds that meet the applicable Compound Acceptance Criteria and to generate and deliver to Enzon LNA Compounds for all Additional Targets in roughly equal intervals within a [\*\*Redacted\*\*] period.

**5.4 Compound Selection.** Each LNA Compound delivered by Santaris to Enzon will be identified by Santaris pursuant to the selection process set forth in **Schedule 5.4A** (the “**Compound Selection Process**”), and shall satisfy the acceptance criteria set forth for such Additional Target in **Schedule 5.4B** (the “**Compound Acceptance Criteria**”). Following the Compound Selection Process, Santaris shall provide Enzon with a written report detailing the results of such process, including its design, synthesis and screening efforts, as well as the sequences of any and all LNA Compounds resulting from such process that meet the Compound Acceptance Criteria. Upon delivery by Santaris of at least [\*\*Redacted\*\*] of substance for at least two (2) LNA Compounds meeting the applicable Compound Acceptance Criteria for an Additional Target (each of which is an “**Accepted LNA Compound**”), Enzon shall pay the amount required under Section 7.3. Enzon shall have the right to synthesize or have synthesized by a Third Party, at Enzon’s sole cost, additional quantities of any and all LNA Compounds delivered by Santaris, as well as quantities of any additional LNA Compounds disclosed in the written report provided by Santaris pursuant to this Section 5.4 that also meets the applicable Compound Acceptance Criteria (each such additional LNA compound synthesized by or for Enzon, if any shall also be an Accepted LNA Compound).

**5.5 In-Vitro and In-Vivo Profiling by Enzon.** Enzon shall conduct such additional *in vitro* and *in vivo* testing as it deems appropriate in its sole discretion to select Accepted LNA Compounds for further Development. Enzon shall use its Diligent Efforts to determine, within [\*\*Redacted\*\*] after delivery of the Accepted LNA Compound against each Additional Target from Santaris, whether it wishes to select any Accepted LNA Compound to commence pre-clinical toxicology studies. Each such Accepted LNA Compound selected by Enzon in writing to Santaris shall be designated a “**Selected LNA Compound**.”

**5.6 Additional Santaris Activities.** Santaris shall, at Enzon’s request, conduct such additional work or provide such additional quantities of Selected LNA Compounds as may be agreed by the Parties, to assist Enzon in its testing activities referred to in Section 5.5. The costs of such additional work or supply shall be paid by Enzon in accordance with commercially reasonable terms.

**5.7 Discovery Program Procedures.**

(a) **Reports.** Periodically during the Discovery Program, and upon the reasonable request of the other Party, each Party shall provide such other Party’s representatives on the JSC with a written summary report that shall summarize the work

performed on the Discovery Program. Notwithstanding the foregoing, under no circumstances shall either Party be required to provide such summary reports more than twice per calendar year.

(b) **Records.** Each Party shall maintain lab notebooks and other records, in sufficient detail for patent and regulatory purposes, that shall be complete and accurate and shall properly reflect all work done and results achieved in the performance of the Discovery Program. Each Party shall have the right, which shall be exercised in a reasonable manner and upon reasonable notice, to request copies of such records for the sole purpose of carrying out its obligations and exercising its rights under this Agreement, or to secure or enforce Patents licensed under this Agreement.

#### 5.8 Abandoned Targets.

(a) If, in respect of any Additional Target and despite the use of Diligent Efforts, including carrying out at least **[\*\*Redacted\*\*]** rounds of LNA Compound design, synthesis and *in vitro* screening of not less than **[\*\*Redacted\*\*]** in each round, Santaris is unable to identify any LNA Compounds against an Additional Target that meet the applicable Compound Acceptance Criteria and reasonably believes that technical issues relating to such Additional Target prevent such identification, Santaris shall have the right to cease its Discovery Program activities in respect of such Additional Target upon notice to Enzon. Enzon shall then have the right to designate a replacement Additional Target. Such right may be exercised only once with respect to each Additional Target and shall be subject to all of the terms set forth in this Article 5, except that Enzon shall not be required to pay any additional fees to designate such replacement Additional Target. All Additional Targets for which Santaris exercises its right to cease its Discovery Program activities pursuant to this Section 5.8, shall no longer be Additional Targets and shall be designated as “**Abandoned Targets**”. If Enzon designates a replacement Additional Target pursuant to this Section 5.8 and such replacement Additional Target itself becomes an Abandoned Target, then Santaris shall within **[\*\*Redacted\*\*]** Business Days refund to Enzon **[\*\*Redacted\*\*]** of the amount paid by Enzon pursuant to Section 7.2. Enzon acknowledges that it shall have no replacement right with respect to any Additional Targets for which the applicable Compound Acceptance Criteria are met and thereafter such LNA Compounds may fail to result in successful preclinical or other studies.

(b) Santaris shall be prohibited from granting any rights to, or performing work on behalf of, any Third Party with respect to any Abandoned Targets without first complying with the terms of this Section 5.8(b). If Santaris proposes, within **[\*\*Redacted\*\*]** after an Abandoned Target is so abandoned pursuant to Section 5.8(a), to grant any rights to any Third Party with respect to such Abandoned Target, Enzon shall have a first right of refusal to acquire such rights upon the same terms and conditions (including economic terms and conditions) as are provided herein as if such Abandoned Target were an Additional Target. If Santaris proposes, later than **[\*\*Redacted\*\*]** months after an Abandoned Target is so abandoned pursuant to Section 5.8(a), to grant any rights to any Third Party with respect to such Abandoned Target, Enzon shall have a first right of refusal to acquire such rights upon terms and conditions no less favorable than those by which Santaris proposes to grant such

rights to the Third Party. Enzon shall have ninety (90) days to exercise such right of first refusal in either event.

**6. DEVELOPMENT AND COMMERCIALIZATION**

**6.1 Development.**

(a) **Development Efforts.** Enzon shall use Diligent Efforts to Develop Selected LNA Compounds in accordance with the Development Plan applicable to such Selected LNA Compound and in accordance with GLP, GCP and GMP, and shall use Diligent Efforts to meet the timelines described below; *provided*, that Enzon’s failure to achieve any of the milestones set forth below in the prescribed timelines despite its use of Diligent Efforts shall not constitute a breach of its obligations under this Agreement. Notwithstanding the forgoing or any obligation under Section 6.2, but subject to Section 6.1(b), if Enzon fails to achieve the Development timelines set forth below in respect of any Enzon Target, Santaris may terminate this Agreement in respect of such Enzon Target pursuant to Section 10.3(d):

Development Milestone	Time to Achieve
[**Redacted**]	[**Redacted**] after delivery by Santaris of the Accepted LNA Compound
[**Redacted**]	(a) [**Redacted**] in respect of [**Redacted**] as long as [**Redacted**];  (b) [**Redacted**] after the [**Redacted**] in respect of [**Redacted**]; and  (c) in respect of other Selected LNA Compounds, [**Redacted**] after [**Redacted**]

(b) **Extension of Time to Achieve Development Milestones.** With respect to each Enzon Target [\*\*Redacted\*\*], Enzon shall have the right, at any time prior to the date of each milestone set forth in Section 6.1(a), to extend the date for each milestone for an additional [\*\*Redacted\*\*] month period. For each such milestone for which Enzon desires such extension, Enzon shall pay to Santaris an amount equal to [\*\*Redacted\*\*] of the amount that otherwise would have been due upon the achievement of such milestone for such Enzon Target pursuant to Section 7.4(a)(i) or 7.4(a)(ii). If Enzon makes any such extension payment and subsequently achieves the milestone for which such extension payment was made, Enzon shall pay only the remaining [\*\*Redacted\*\*] of such milestone payment pursuant to Section 7.4(a).

(c) **Development Plans.**

(i) Enzon shall use Diligent Efforts to prepare a plan for the Development of SPC2968, SPC3042 and each Selected LNA Compound, which plans will be designed to enable, as appropriate, the filing and receipt of Regulatory Approval in the Enzon Territory for a Product containing SPC2968, SPC3042 and each Selected LNA Compound (each such plan, an “**Enzon Development Plan**”).

(ii) If Santaris plans on conducting any Development activities for SPC2968, SPC3042 or any other Selected LNA Compound, Santaris shall use Diligent Efforts to prepare a plan for such Development activities, which plans will be designed to enable, as appropriate, the filing and receipt of Regulatory Approval in the Santaris Territory for a Product containing SPC2968, SPC3042 and each Selected LNA Compound (each such plan, a “**Santaris Development Plan**”, and each Enzon Development Plan and Santaris Development Plan, a “**Development Plan**”).

(iii) The initial draft of each Development Plan shall be provided to the JSC promptly after the Party completes such initial draft. Each Development Plan will set forth the objectives and planned tasks for the conduct of the Development activities, and shall contain such details as contained in the Party’s regularly prepared development plans for its other products. Each Party shall provide a copy of such initial drafts and any material changes to each Development Plan to the other Party and consider in good faith any comments such other Party may have with respect thereto.

(d) **Development Activities; Clinical Trials.**

(i) Enzon shall discuss with Santaris, but shall have the sole discretion to determine, whether to advance a non-Pegylated or a Pegylated Selected LNA Compound modulating a particular Enzon Target through Development. If Enzon chooses to advance only the Pegylated Selected LNA Compound modulating a particular Enzon Target through Development, neither Santaris nor its Affiliates (either alone or with or through a Third Party) shall have the right to Develop, make, use or Commercialize the non-Pegylated Selected LNA Compound either in the Santaris Territory or the Enzon Territory for so long as such Target remains an Enzon Target, except with the consent of Enzon in its judgment after taking into account in good faith the relevant rationale for such request.

(ii) In designing protocols and Development Plans for the Enzon Territory, Enzon will use commercially reasonable efforts to design a Development strategy to support filings for Regulatory Approvals in both the Enzon Territory and, subject to Section 6.1(d)(iii), the Santaris Territory; *provided* that, in all cases, Enzon’s Development activities comply with applicable Laws and other requirements of Regulatory Authorities of the Enzon Territory. In designing protocols and Development Plans for the Santaris Territory, Santaris will use commercially reasonable efforts to design a Development strategy to support filings for Regulatory Approvals in both the Santaris Territory and, to the extent Santaris or any of its Affiliates, licensees or sublicensees choose to conduct Development activities relating to the development of indications not being developed by Enzon or otherwise relating to Development with a scope greater than to address requirements specific to the Santaris

Territory, the Enzon Territory; *provided*, that, in all cases, Santaris's Development activities comply with applicable Laws and other requirements of Regulatory Authorities of the Santaris Territory.

(iii) Each Party (the "**Sponsoring Party**") shall provide a copy of the proposed Development Plan and any proposed material amendment and any proposed protocol for each clinical trial to the other Party in advance of filing an IND or commencing a clinical trial for such protocol in order for the other Party to notify the Sponsoring Party if it believes any modifications to such Development Plan or protocol would be required to perform different or additional Development in order to support a Regulatory Filing in the Santaris Territory or, in the case of Santaris, to the extent required in paragraph (d)(ii) above, the Enzon Territory. Such other Party shall have up to five (5) Business Days to review each such Development Plan and protocol for such purpose, and provide comments thereto. If such other Party reasonably believes that any changes are necessary in order to support a Regulatory Filing in the Santaris Territory or, to the extent applicable, the Enzon Territory, the Parties shall discuss the extent and nature of such additional Development activities. If the Parties agree that the additional Development work in order to support such Regulatory Filings would add no cost or delay to the Sponsoring Party's proposed Development activities, the Sponsoring Party shall incorporate the other Party's reasonable scientific and medical comments into such protocol prior to filing any IND or commencing a clinical study for such protocol and the Sponsoring Party shall conduct all such Development activities at its cost and expenses. If the Parties agree that the additional Development work in order to support such Regulatory Filings would be minimal relative to the scope of the protocol, the Sponsoring Party shall incorporate the other Party's reasonable scientific and medical comments into such protocol prior to filing any IND or commencing a clinical study for such protocol and the Sponsoring Party shall conduct all such additional Development activities at the other Party's cost and expenses. If the Parties agree that the Development work necessary to support such Regulatory Filings would be more than minimal, the Sponsoring Party shall have the right, but not the obligation, at its sole discretion, to amend the Development Plan or protocol to accommodate such additional Development activities at the other Party's cost and expense. If the Sponsoring Party does not agree to undertake such additional Development activities, such other Party shall be solely responsible for undertaking such additional Development activities at its sole cost and expense.

(iv) Neither Party (nor any of its Affiliates, licensees or sublicensees) shall be entitled to conduct any clinical trials with respect to any Product in the other Party's Territory without the other Party's prior written approval. If a Party desires to conduct a clinical study in the other Party's Territory, such Party shall provide notice to the other Party of such desire and the Parties shall discuss in good faith the conduct of such clinical study, including whether the other Party will act as a contract research organization to conduct such study and the grant of such license rights as may be required to conduct such study. If the Parties agree that the other Party will act as a contract research organization, the Parties will negotiate in good faith a separate agreement to govern such contract research organization arrangement.

(e) **Development Costs.** Subject to Section 6.1(d)(iii), Enzon shall be responsible for all costs associated with the Development of Products for the Enzon Territory

and Santaris shall be responsible for all costs associated with the Development of Products for the Santaris Territory.

(f) **Santaris Assistance.** In regard to the Development of SPC2968, Santaris shall provide, at no additional cost to Enzon, such assistance as may be reasonably requested by Enzon (and to the extent Santaris possesses the necessary expertise) in the preparation and filing of an IND in the United States. If, following acceptance of such IND, Enzon requests Santaris to assist it further in the implementation of any aspect of the Development of a Product aimed at MAA submissions in the Enzon Territory, Santaris shall conduct such additional work as may be agreed by the Parties. The costs of such additional work shall be paid by Enzon in accordance with commercially reasonable terms.

(g) **Ongoing Disclosure.** Each Party will keep the other Party fully-informed about its efforts to Develop Selected LNA Compounds for such Party's territory, including summaries of all results and data from such Development efforts, and all significant findings and developments. Such disclosures will be made in written reports to the other Party's representatives on the JSC at least once annually. Without limiting the generality of the foregoing, such reports will contain disclosure of the following:

(i) summary of clinical and non-clinical Development Data, progress of initiation of sites and enrollment of patients in clinical trials, and any significant events occurring in the clinical development program;

(ii) filing of an IND or MAA or other Regulatory Filings with respect to any Selected LNA Compound in any jurisdiction;

(iii) initiation of any clinical study with respect to any Selected LNA Compound in any jurisdiction; and

(iv) identification of significant development results and clinical trial progress and Regulatory Approvals with respect to Selected LNA Compounds in any jurisdiction.

(h) **Development Records.** The Parties shall maintain any Development Data, related records, documents, and raw data in sufficient detail as will properly reflect all work done and results achieved in the Development of the Products. Each Party shall have the right, which shall be exercised in a reasonable manner, to copy the other Party's Development Data for the sole purpose of carrying out its obligations and exercising its rights under this Agreement. To the extent not otherwise provided for herein, upon reasonable request of one Party, the other Party will provide copies of final reports and all material data relating to clinical studies performed by such other Party on Selected LNA Compounds or Products that are required to be submitted in connection with seeking Regulatory Approvals for Products, and any other information or data reasonably requested by the requesting Party that is necessary for its continued Development and Commercialization of Products in its territory.

(i) **Adverse Events.** Promptly following the Effective Date, Enzon and Santaris will enter into a safety data exchange agreement setting forth procedures governing the coordination of collection, investigation, reporting, and exchange of information

concerning adverse events sufficient to permit each Party, its Affiliates, sublicensees or licensees to comply with its legal obligations. The safety data exchange procedures will be promptly updated if required by changes in legal requirements or by agreement between the Parties. In any event, each Party shall inform the other Party of any Adverse Event of which it becomes aware in a timely manner commensurate with the seriousness of the Adverse Event. Each Party shall establish and maintain a database for all Adverse Events in its Territory in accordance with mutually agreed specifications and shall provide information from such database to the other Party, as set forth in the safety data exchange agreement to be entered into by the Parties, for Regulatory Filings and other purposes solely in connection with the Development and Commercialization of the Products in such other Party's territory. Enzon will be responsible for reporting all Adverse Events to the FDA and other Regulatory Authorities in the Enzon Territory in accordance with the Laws of the relevant countries and authorities and Santaris will be responsible for reporting all Adverse Events to the appropriate Regulatory Authorities in the Santaris Territory in accordance with the Laws of the relevant countries and authorities. Enzon will ensure that its Affiliates, licensees and sublicensees comply with all such reporting obligations, and Santaris will ensure that its Affiliates, licensees and sublicensees comply with all such reporting obligations. Each Party will designate a safety liaison to be responsible for communicating with the other Party regarding the reporting of Adverse Events. For the purpose of this Section 6.1(i), "Adverse Event" means any adverse drug reaction or experience as defined in the then current edition of ICH Guidelines, 21 CFR §310.305, 21 CFR §314.80 and any other relevant regulations or regulatory guidelines.

**6.2 Regulatory Affairs.**

(a) After the Effective Date, Enzon shall assume sole ownership, control and responsibility for all Regulatory Filings in the Enzon Territory, and shall use Diligent Efforts to obtain Regulatory Approvals for at least one Product containing each Selected LNA Compound in the Enzon Territory.

(b) Each Party shall grant the other Party and such other Party's Affiliates, licensees or sublicensees, as applicable, the exclusive, royalty-free right to use and cross-reference any Development Data and Regulatory Filings as may be required solely to allow such other Party, its Affiliates, licensees or sublicensees, as applicable, to Develop, manufacture, obtain Regulatory Approvals, conduct Phase IV Trials, Commercialize Products in the Enzon Territory or Santaris Territory, as applicable, to the extent otherwise permitted under this Agreement. Each Party shall provide to the other, a copy of all Regulatory Filings that it submits to Regulatory Authorities in its territory.

(c) Each Party shall grant to the other the royalty-free right to use and reference the Development Data and other results generated from Phase IV Trials conducted by or for such Party for a Product necessary or useful for the Commercialization of Products by the other Party in such other Party's territory.

(d) In conducting any Development activities hereunder, each Party shall use its commercially reasonable efforts to see that its employees, agents, clinical institutions and clinical investigators comply with all applicable Laws.

(e) Enzon will provide Santaris with advance copies of all (i) MAA submissions to FDA at least twenty (20) days (or such shorter time if twenty (20) days is not practicable under the circumstances) and (ii) all other material submissions to FDA at least five (5) Business Days (or such shorter time if five (5) Business Days is not practicable under the circumstances), in each case, prior to making such submission in order to allow Santaris to review and comment upon each such submission. Santaris will provide comments to Enzon, if any, on each such submission, within ten (10) days of receipt of the submission from Enzon with respect to an MAA and within five (5) days of receipt of the submission from Enzon with respect to all other material submissions. In finalizing its submissions, Enzon will consider in good faith all comments received from Santaris with respect thereto. Santaris will provide to Enzon with advance copies of all (x) MAA submissions to European Medicines Agency (“**EMA**”) at least twenty (20) days (or such shorter time if twenty (20) days is not practicable under the circumstances) and (y) all other material submissions to the EMA at least five (5) Business Days (or such shorter time if five (5) Business Days is not practicable under the circumstances), in each case, prior to making such submission in order to allow Enzon to review and comment upon each such submission. Enzon will provide comments to Santaris, if any, on each such submission, within ten (10) days of receipt of the submission from Santaris with respect to an MAA and within five (5) days of receipt of the submission from Santaris with respect to all other material submissions. In finalizing its submissions, Santaris will consider in good faith all comments received from Enzon with respect thereto.

### **6.3 Manufacture and Supply.**

#### **(a) LNA Monomers.**

(i) **Manufacturing Development.** Santaris shall use Diligent Efforts to develop or have developed a suitable formulation of each LNA Monomer necessary for the manufacture of each Selected LNA Compound and Product and to develop scale-up and validation procedures for the manufacture of commercial quantities of each LNA Monomer and conduct such other manufacturing development work as is reasonably necessary to manufacture quantities of each LNA Monomer necessary for the manufacture of each Selected LNA Compound and Product, including formulation and stability development and process validation. If Santaris licenses or otherwise engages a Third Party to manufacture and sell LNA Monomers (other than as a contract manufacturer solely for Santaris), Santaris shall allow Enzon to contract with and receive supply directly from any such Third Party.

(ii) **Manufacture of LNA Monomers by Enzon.** Subject to the licenses granted in Article 2, Enzon shall have the right to manufacture its requirements of LNA Monomers for use in manufacturing each Selected LNA Compound and Product for Development or sale in the Enzon Territory.

(iii) **Santaris Supply to Enzon.** Enzon shall have the right, but not the obligation, to order supply of LNA Monomers from Santaris, and Santaris shall use its Diligent Efforts to manufacture or have manufactured, and maintain or arrange sufficient manufacturing capacity to supply to Enzon or Enzon’s licensee(s), LNA Monomers for the manufacture of all Selected LNA Compounds and Products for sale in the Enzon Territory and for Development purposes, on terms substantially in accordance with those set forth on

**Schedule 6.3(a)** and other customary terms to be reflected in a separate manufacturing and supply agreement between Santaris and Enzon.

(b) **Selected LNA Compounds and Products.**

(i) **Manufacturing Development.** Enzon shall use Diligent Efforts to develop or have developed a suitable formulation of each Selected LNA Compound and Product and to develop scale-up and validation procedures for the manufacture of quantities of each Selected LNA Compound and Product and conduct such other manufacturing development work as is reasonably necessary to manufacture quantities of each Selected LNA Compound and Product, including formulation and stability development and process validation. If Enzon engages a Third Party to manufacture and supply a Selected LNA Compound or Product (other than as a contract manufacturer solely for Enzon), Enzon shall allow Santaris to contract with and receive supply directly from any such Third Party.

(ii) **Manufacture of Selected LNA Compounds and Products.** Subject to the licenses granted in Article 2, Santaris shall have the right to manufacture and have manufactured its requirements of Selected LNA Compounds and Products for Development or sale in the Santaris Territory, except that Santaris shall not have the right to use Third Parties to manufacture Pegylated Selected LNA Compounds or Pegylated Products without Enzon's prior written consent, other than finishing, packaging and other services not using any Enzon Pegylation Technology.

(iii) **Enzon Supply to Santaris.** Santaris shall have the right, but not the obligation, to order supply of Selected LNA Compounds or Products from Enzon, and Enzon shall manufacture or have manufactured, and maintain or arrange sufficient manufacturing capacity to supply to Santaris or Santaris's licensee(s), Selected LNA Compounds and Products for sale in the Santaris Territory and for Development purposes, on terms substantially in accordance with those set forth on **Schedule 6.3(b)** and on other customary terms to be reflected in a separate manufacturing and supply agreement between Santaris and Enzon.

(c) **Drug Master Files.** Santaris shall have the right to cross-reference Enzon's drug master file for the manufacture of LNA Monomers and Products for the sole purpose of enabling Santaris to manufacture and supply Product for Commercialization in the Santaris Territory pursuant to Section 6.3(b)(i). Enzon shall have the right to cross-reference Santaris's drug master file for the manufacture of LNA Monomers for the manufacture of Selected LNA Compounds and Products for the sole purpose of enabling Enzon to manufacture and supply LNA Monomers for the manufacture of Selected LNA Compounds and Products for Commercialization in the Enzon Territory pursuant to Section 6.3(a)(ii).

**6.4 Product Trademarks.** Enzon shall select the Product Trademarks for sale of Product in the Enzon Territory, and shall own and enforce such Product Trademarks and all goodwill associated therewith throughout the world, and shall have the right to register such Product Trademarks in each country in the Enzon Territory and the Santaris Territory. Enzon shall grant Santaris a royalty free license to use such Product Trademarks solely in the Santaris Territory solely in connection with the sale in the Santaris Territory of Products by Santaris, its

Affiliates or licensees for as long as Santaris, its Affiliates or licensee sell Products. To the extent Santaris elects to use the Product Trademarks, (a) it shall use the Products Trademarks in accordance with sound trademark usage principles and in accordance with all Laws, (b) all goodwill resulting from such use shall inure to the benefit of Enzon, and (c) Enzon shall have the right, which shall be exercised in a reasonable manner, to inspect Santaris's facilities and records and those of its Affiliates and licensees, relating to the Products to the extent reasonably required to assure conformance with the foregoing requirements.

#### **6.5 Commercialization.**

(a) **Marketing Efforts in the Enzon Territory.** Enzon shall use Diligent Efforts to promote, market, sell and otherwise Commercialize the Products in the Enzon Territory. Such efforts may include, as appropriate as determined by Enzon in its sole discretion, the use of product detailing efforts directed to potential prescribers of the Product, pre-launch medical education campaigns, pricing and reimbursement activities, medical education activities, Phase IV Trials and other sales, marketing and promotion activities.

(b) **Advertising and Promotion.** Each Party, its Affiliates, licensees or sublicensees, as applicable, may adapt and use the core promotional and training materials prepared by the other Party for marketing the Products in such other Party's territory, as applicable, in connection with the marketing and promotion of the Products in each Party's territory. The preparing Party shall own the copyright and all related rights in all of its advertising and promotional and training materials.

(c) **Commercialization Plans.** Each Party shall use Diligent Efforts to prepare annual marketing plans for each Product, such plans shall contain the details contained in the marketing plans regularly prepared by such Party for its other products and shall include plans related to the pre-launch, launch, promotion and sale of the Product, and the general nature of the marketing, promotion and advertising campaigns proposed to be conducted, including, in the case of Enzon, the number of sales representatives proposed to detail the Product (each such plan a "**Commercialization Plan**"). Each Party shall provide the other Party a copy of all Commercialization Plans for each Product as soon as practicable after such plan is completed.

(d) **Ongoing Disclosure Regarding Commercialization.** Each Party will keep the other Party informed about such Party's efforts to Commercialize the Products, including summaries of such Party's (and its Affiliates' and Marketing Sublicensees' and Santaris' marketing sublicensees) major marketing activities, product positioning plans, progress towards meeting the goals and milestones in the Commercialization Plan, significant developments in the Commercialization of the Products, copies of Commercialization Plans and any material changes thereto, representative samples of promotional materials, and, in the case of Enzon, any reasons for any deviations or variances (either in time or in sales or other numerical figures) in meeting sales projections, milestones or timelines in any of its Commercialization Plans. Such disclosures will be made through the members of the JSC in a written report provided to the other Party at least once every six (6) months while Products are being sold anywhere in the Enzon Territory or Santaris Territory, as applicable. Enzon shall be solely responsible for the pricing and other terms of sale for the Products in the Enzon

Territory, and Santaris shall be solely responsible for the pricing and other terms of sale for the Products in the Santaris Territory.

(e) **Coordination.** Subject to Law, the Parties shall coordinate and exchange information relating to the marketing efforts for the Enzon Territory and the Santaris Territory, including information relating to medical claims regarding the Products, medical conferences, publications, pricing, product profiling and positioning strategy.

**7. FINANCIAL TERMS TO SANTARIS**

**7.1 Initial Fee.** Enzon shall pay to Santaris the following fees within ten (10) Business Days after the Effective Date:

- (a) US\$3,000,000 in respect of the rights granted hereunder to SPC2968;
- (b) US\$3,000,000 in respect of the rights granted hereunder to SPC3042; and
- (c) US\$2,000,000 in respect of the reimbursement of costs incurred prior to the Effective Date to discover and develop SPC2968 and SPC3042.

**7.2 Additional Target Fees.** Enzon shall pay Santaris an aggregate of US\$3,000,000 for the six (6) Additional Targets designated by Enzon pursuant to Section 5.2 upon the expiration of the Reservation Period.

**7.3 Selected LNA Compound Acceptance Fees.** Within thirty (30) days after the delivery by Santaris of at least [\*\*Redacted\*\*] of LNA Compounds meeting the Compound Acceptance Criteria for an Additional Target pursuant to Section 5.4, Enzon shall pay US[\*\*Redacted\*\*] with respect to each of six (6) Additional Targets.

**7.4 Milestone Payments.**

(a) Enzon shall pay Santaris a milestone payment (each, an “**Event Milestone Payment**”) in respect of each of the following events (each, an “**Event Milestone**”) in the amounts set forth below no later than thirty (30) days after the occurrence of each Event Milestone:

Event Milestone	Event Milestone Payment		
	SPC3042	SPC2968	Other Selected LNA Compounds
(i) Determination by Enzon to [**Redacted**]	n/a	n/a	US[**Redacted**] per Additional Target
(ii) Filing of an IND in the Enzon Territory for the first Product	US[**Redacted**]	US[**Redacted**]	US[**Redacted**] per Additional Target

Event Milestone	Event Milestone Payment		
	SPC3042	SPC2968	Other Selected LNA Compounds
(iii) Completion of [**Redacted**]	US[**Redacted**]	US[**Redacted**]	US[**Redacted**] per Additional Target
(iv) Acceptance of filing of a MAA for the first Product in the Enzon Territory	US[**Redacted**]	US[**Redacted**]	US[**Redacted**] per Additional Target
(v) Launch of the first Product for each Target in the Enzon Territory	US[**Redacted**]	US[**Redacted**]	US[**Redacted**] per Additional Target

(b) Regardless of the number of Selected LNA Compounds or Products developed by Enzon with respect to each Enzon Target, each of the Event Milestone Payments set forth above shall be paid only one (1) time for each Enzon Target.

(c) If the Event Milestone Payment set forth in Section 7.4(a)(ii), (iii) or (iv) is achieved without triggering one or more of the preceding Event Milestone Payments, then Enzon shall pay to Santaris the preceding Event Milestone Payments that were not paid on the date that such later Event Milestone Payment is due.

(d) If Enzon has given Santaris any notice of termination of this Agreement in its entirety under Section 10.2, Enzon shall not be liable for the Event Milestone Payments that first accrue after the date of such notice.

#### 7.5 Royalty Payments.

(a) **Royalty Rate.** During the applicable Royalty Term, on a country-by-country and Product-by-Product basis, Enzon shall pay Santaris royalty payments equal to [\*\*Redacted\*\*] of Net Sales; *provided* that if the royalty rate payable to [\*\*Redacted\*\*] pursuant to the [\*\*Redacted\*\*] is reduced, then the royalty rate set forth in this Section 7.5(a) shall be automatically reduced by [\*\*Redacted\*\*] of such reduction; *provided, further*, that Enzon shall have paid or reimbursed Santaris for [\*\*Redacted\*\*] of all payments made to [\*\*Redacted\*\*] or [\*\*Redacted\*\*] by Santaris or Exiqon to obtain such reduced royalty rates, not to exceed a total amount payable by Enzon of US[\*\*Redacted\*\*]. For example, if the royalty rate payable to [\*\*Redacted\*\*] is reduced from [\*\*Redacted\*\*] to [\*\*Redacted\*\*], then the royalty rate set forth in this Section 7.5(a) shall be reduced from [\*\*Redacted\*\*] to [\*\*Redacted\*\*]. If at any time during the Royalty Term, Enzon is required to pay directly to [\*\*Redacted\*\*], for any reason, the royalties required to be paid to

**[\*\*Redacted\*\*]** by Exiqon under the **[\*\*Redacted\*\*]**, then the royalties payable to Santaris under this Section 7.5(a) shall be reduced by the amount of any royalty payments made directly by Enzon to **[\*\*Redacted\*\*]**.

(b) **Royalty-Free Sales.** For the avoidance of doubt, no royalties shall be due upon the sale or other transfer among Enzon or its Affiliates or Marketing Sublicensees, but in such cases the royalty shall be due and calculated upon Enzon's or its Affiliate's or Marketing Sublicensees' Net Sales to the first independent Third Party; and no royalties shall accrue on the disposition of Product (i) without consideration in reasonable quantities by Enzon or its Affiliates or Marketing Sublicensees (x) as samples (promotion or otherwise), or (y) as donations (for example, to non-profit institutions or government agencies for a noncommercial purpose), (ii) pursuant to "treatment IND", compassionate use, or other patient care programs authorized by any Regulatory Authority, solely to the extent that the consideration, if any, paid to Enzon or its Affiliates or Marketing Sublicensees pursuant to any such program is limited to reimbursement to Enzon or its Affiliates or Marketing Sublicensees of its costs of manufacturing and providing the Product, or (iii) in connection with clinical trials for such Product.

(c) **Expiration of Royalty Term.** Upon expiration of the Royalty Term in any country with respect to any Product, then as of the effective date of such expiration on a country-by-country basis, the licenses from Santaris to Enzon under Section 2.1 shall convert to a fully-paid, perpetual, non-exclusive, sublicensable license under the Santaris Technology to make, have made, use, import, offer for sale, sell and otherwise Commercialize such Product in such country in the Enzon Territory from LNA Monomers supplied by Santaris (or a Third Party designated by Santaris) or manufactured by Enzon pursuant to the license granted under Section 2.1(c). Enzon acknowledges that royalties are payable during the Royalty Term for each Product and that the Royalty Term is determined, in part, by the duration of LNA Compound Patents, whether such Patents are owned by Santaris, Enzon or jointly by the Parties. The Parties have agreed on such royalty duration and patent ownership rights to accommodate their mutual intent. Enzon further acknowledges that such royalty duration is a fair and reasonable method to reflect the value contributed by Santaris in respect of the Products.

**7.6 Third Party Royalties; Fees.** With respect to any royalties payable by Santaris to Third Parties based on sales of Products pursuant to license or other agreements in effect as of the Effective Date, **[\*\*Redacted\*\*]**.

**7.7 Third Party Rights Obtained by Enzon.** If, in either Party's good faith, reasonable judgment, it is reasonably necessary, to pursue an Additional Target under this Agreement or otherwise in the best interest of the commercial success of a Product, that a license be obtained under an issued patent(s) from one or more Third Parties in any country for the use of an Additional Target or the Development, manufacture or Commercialization of any Product pursuant to the licenses granted hereunder, then Enzon shall use commercially reasonable efforts to obtain such license rights. Enzon shall consult with Santaris prior to entering into any such license agreement and provide Santaris a reasonable opportunity to provide its views on the need or benefit to obtain such license and the financial and other terms thereof, and Enzon shall provide Santaris with complete copies of all draft and final

agreements with such Third Party and other material information in its possession in respect of such technology. To the extent requested by Santaris to pursue the Discovery Program or Develop, manufacture or Commercialize Products in the Santaris Territory, Enzon shall use commercially reasonable efforts to obtain the right to sublicense or direct licenses to Santaris or its licensees for such use of such Third Party technology in the Santaris Territory; *provided*, that **[\*\*Redacted\*\*]**. Such obligations shall apply to only such Third Party patents that were identified as a result of the freedom to operate analysis undertaken by Enzon pursuant to Section 5.2 or by either Party within 180 days after designation of such Additional Target. Subsequent to such one hundred eighty (180) day period, if, in either Party's good faith, reasonable judgment, it is reasonably necessary, to pursue an Additional Target under this Agreement or otherwise in the best interest of the commercial success of a Product, that a license be obtained under an issued patent(s) from one or more Third Parties in any country for the use of an Additional Target or the Development, manufacture or Commercialization of any Product hereunder, the Parties shall cooperate in good faith to obtain the right to sublicense or direct licenses for such use of such Third Party technology.

**7.8 Payments and Payment Reports.** All royalties due under Section 7.5 shall be paid within forty-five (45) days of the end of the relevant Enzon Quarter for which such payments are due. Each royalty payment shall be accompanied by a statement stating the number, description, aggregate gross sales and aggregate Net Sales, by country, of each Product sold during the relevant Enzon Quarter and shall also include the currency conversion rate used, and a calculation of the amount of royalty payment due on such Net Sales.

**7.9 Payment Method.** All payments due under this Agreement to Santaris shall be made by bank wire transfer in immediately available funds to an account designated by Santaris. All payments hereunder shall be made in the legal currency of the United States of America and shall be paid by Enzon from the United States, regardless of where the Net Sales accrue.

**7.10 No Credits or Refunds.** All payments to Santaris hereunder shall be non-creditable, except as set forth in Section 7.15, and nonrefundable.

**7.11 Taxes.**

(a) **VAT.** It is understood and agreed between the Parties that any payments made under Sections 7.1 through 7.5 of this Agreement are exclusive of any value-added or similar tax imposed upon such payments.

(b) **Withholding Taxes.** In addition, if any of the payments made by Enzon pursuant to such Sections become subject to withholding taxes under the Laws of any jurisdiction, Enzon shall deduct and withhold the amount of such taxes for the account of Santaris to the extent required by Law, such amounts payable to Santaris shall be reduced by the amount of taxes deducted and withheld, and Enzon shall pay the amounts of such taxes to the proper Governmental Authority in a timely manner and promptly transmit to Santaris an official tax certificate or other evidence of such tax obligations together with proof of payment from the relevant Governmental Authority of all amounts deducted and withheld sufficient to enable Santaris to claim such payment of taxes. Any such withholding taxes required under

Law to be paid or withheld shall be an expense of, and borne solely by, Santaris. Enzon will provide Santaris with reasonable assistance to enable Santaris to recover such taxes as permitted by Law.

**7.12 Foreign Exchange.** Conversion of sales recorded in local currencies to U.S. dollars will be performed in a manner consistent with Enzon's normal practices used to prepare its audited financial statements for external reporting purposes, provided that such practices use a widely accepted source of published exchange rates.

**7.13 Blocked Currency.** In each country where the local currency is blocked and cannot be removed from the country, royalties accrued in that country shall be paid to Santaris in the country in local currency by deposit in a local bank designated by Santaris, unless the Parties otherwise agree.

**7.14 Interest.** If Enzon fails to make any payment due to Santaris under this Agreement, then, commencing with the date that is thirty (30) days after such payment was due, interest shall accrue on a daily basis at a rate per annum equal to the thirty (30) day U.S. dollar LIBOR rate effective for the date that payment was due as published by *The Wall Street Journal*, plus **[\*\*Redacted\*\*]**.

**7.15 Records; Audits.** Enzon shall keep or cause to be kept such records as are required to determine, in a manner consistent with generally accepted accounting principles in the United States, the sums or credits due under this Agreement, including Net Sales. At the request and expense of Santaris, Enzon shall permit an independent certified public accountant appointed by Santaris or any licensor under a Third Party License and reasonably acceptable to Enzon, at reasonable times not more than once a year and upon reasonable notice, to examine only those records as may be necessary to determine, with respect to any year ending not more than two (2) years (or such longer period if required by a party to a Third Party License (other than Santaris) pursuant to a Third Party License) prior to such request, the correctness or completeness of any royalty report or payment made under this Agreement; *provided*, however, that Santaris may only review each royalty report once pursuant to this Section 7.15. Results of any such examination shall be (a) binding on the Parties other than in the case of manifest error, (b) limited to information relating to the Products, (c) made available to both Parties, and (d) subject to the confidentiality provisions of Article 9. Santaris shall bear the full cost of the performance of any such audit, unless such audit discloses an underpayment of more than five percent (5%) from the amount of the original report, royalty or payment calculation, in which case Enzon shall bear the full cost of the performance of such audit. Enzon shall promptly pay to Santaris the amount of any underpayment of royalties revealed by an examination and review. Any overpayment of royalties by Enzon revealed by an examination and review shall be fully-creditable against future royalty payments under Section 7.5.

## 8. INTELLECTUAL PROPERTY

**8.1 Ownership of Technology.** Subject to the terms hereof, including the licenses and other rights granted hereunder, all Know-How and Inventions shall be owned as follows:

(a) Santaris shall own the entire right, title and interest in and to all LNA Platform Technology, regardless of inventorship; without the need for any further action by a Party and subject to the licenses granted hereunder, Enzon agrees to assign, and hereby does assign, its entire, right, title and interest in and to any LNA Platform Technology to Santaris;

(b) Enzon shall own the entire right, title and interest in and to all Enzon Pegylation Technology, regardless of inventorship; without the need for any further action by a Party and subject to the licenses granted hereunder, Santaris agrees to assign, and hereby does assign, its entire, right, title and interest in and to any Enzon Pegylation Technology to Enzon;

(c) In respect of all LNA Compound Patents:

(i) Santaris shall initially own the entire right, title and interest in and to all provisional and other priority patent applications, regardless of inventorship; and without the need for any further action by a Party and subject to the licenses granted hereunder, Enzon agrees to assign, and hereby does assign, its entire right, title and interest in and to any such LNA Compound Patents to Santaris. Immediately following the filing of each international patent application filed under the Patent Cooperation Treaty claiming a Selected LNA Compound or Product (a "**PCT Application**"), Santaris and Enzon shall jointly own the right, title and interest in and to such the PCT Application, regardless of inventorship; and without the need for any further action by a Party and subject to the licenses granted hereunder, Santaris agrees to assign, and hereby does assign, such right, title and interest in and to any LNA Compound Patents to Enzon so that Santaris and Enzon shall jointly own such LNA Compound Patents.

(ii) At the time each PCT Application enters the national or regional phase in any country or region in the Santaris Territory, Enzon agrees to assign, and hereby does assign, such right, title and interest in and to any such LNA Compound Patent to Santaris so that Santaris shall own the entire right, title and interest in and to such LNA Compound Patent in all countries in the Santaris Territory.

(iii) At the time each PCT Application enters the national or regional phase in any country or region in the Enzon Territory, Santaris and Enzon shall continue to jointly own such LNA Compound Patent in all countries in the Enzon Territory.

(iv) Promptly after the Effective Date, Santaris shall assign, and hereby does assign, to Enzon such right, title and interest in and to all existing LNA Compound Patents listed on Schedule 1.57 that are PCT Applications or have entered the national phase in any country in the Enzon Territory so that Santaris and Enzon shall jointly own such LNA Compound Patents, except for those that have already entered the national or regional phase in any country or region in the Santaris Territory so that Santaris shall continue to own those LNA Compound Patents in the Santaris Territory.

(v) If Enzon discontinues all Development or Commercialization activities of all Selected LNA Compounds claimed under an LNA Compound Patent jointly owned by the Parties, Enzon shall then assign its entire, right, title and interest in such LNA Compound Patent to Santaris.

(vi) Except to the extent permitted under Section 2.4 or with the prior written consent of Santaris, Enzon shall not assign, license, grant, suffer, permit or otherwise transfer any license, rights, security interest, lien or other encumbrance, or other interest of any kind in such LNA Compound Patents (except in connection with an assignment pursuant to Section 14.8).

(d) Subject to appropriate confidentiality undertakings, each Party shall notify the other Party promptly after the completion of invention disclosure statements for each Invention (or, if any provisional or other patent applications if filed claiming such Invention, promptly after such filing), and, to the extent a Party is granted rights hereunder in such Invention, shall provide a copy of the same to the other Party.

**8.2 Patent Prosecution and Maintenance.** Patents shall be prosecuted and maintained as follows:

(a) **LNA Platform Patents.** Santaris shall direct the filing, prosecution (including any interferences, oppositions, reissuance, and re-examinations) and maintenance of all LNA Platform Patents in at least the countries listed in **Schedule 8.2(a)** and shall consider in good faith any additional countries that Enzon shall reasonably request. Santaris shall keep Enzon informed about any material progress of such prosecution and maintenance.

(b) **Enzon Pegylation Patents.** Enzon shall direct the filing, prosecution (including any interferences, oppositions, reissuance, and re-examinations) and maintenance of all Enzon Pegylation Patents. Enzon shall keep Santaris informed about any material progress of such prosecution and maintenance.

(c) **LNA Compound Patents.** Santaris shall initially file and prosecute all provisional and other priority patent applications, which, to the extent permitted and appropriate, shall be filed simultaneously in Denmark and the United States, and the PCT Applications. The parties shall jointly prepare the PCT Applications and each of Santaris and Enzon shall have the right to approve of the initial filing of the PCT Applications. Following assignment to Enzon of joint ownership in a PCT Application in accordance with the terms of Section 8.1(c)(i), Enzon shall prosecute and maintain such PCT Application for the benefit of both Parties. At the time each such PCT Application enters the national or regional phase in any country in the Santaris Territory, Santaris shall thereafter direct the filing, prosecution (including any interferences, oppositions, reissuance, and re-examinations) and maintenance of all LNA Compound Patents in countries in the Santaris Territory. At the time each such PCT Application claiming a Selected LNA Compound or Product enters the national or regional phase in any country in the Enzon Territory, Enzon shall continue to direct the filing, prosecution (including any interferences, oppositions, reissuance, and re-examinations) and maintenance of all LNA Compound Patents in countries in the Enzon Territory. The Party having the right to prosecute in accordance with the foregoing is referred to as the

**“Prosecuting Party”.** Prosecuting Party shall provide the other Party promptly with copies of all patent applications, correspondences and other communications relating to LNA Compound Patents to and from patent offices and provide the other Party at least sixty (60) days to offer comments. Prosecuting Party shall consider in good faith any comments the other Party may have with regard to the preparation, filing, prosecution and/or maintenance of the patent applications and patents related to such LNA Compound Patents. Prosecuting Party shall provide the other Party, a reasonable time prior to taking or failing to take action that would affect the scope or validity of rights under any LNA Compound Patent (including substantially narrowing or canceling any claim without reserving the right to file a continuing or divisional application, abandoning any patent or not filing or perfecting the filing of any patent application in any country), with notice of such proposed action or inaction so that the other Party has a reasonable opportunity to review and make comments, and take such actions as may be appropriate in the circumstances. However, the foregoing three sentences shall not apply to the prosecution of national or regional phase applications in the Santaris Territory, except that Santaris shall keep Enzon informed of the material progress of such prosecution and shall provide such documents and take such actions as may be reasonably required to facilitate the prosecution of corresponding Patents in the Enzon Territory. The Parties and their patent counsel shall establish such procedures as may be desired to carry out the mutual review and consultation procedure contemplated under this Section 8.2(c) without imposing unreasonable burdens and delays on the prosecution of the LNA Compound Patents. If Enzon, as the Prosecuting Party, determines not to file, prosecute, defend or maintain any LNA Compound Patent (including failing to defend any interference or opposition proceedings) in any country, and providing that no other patent applications or patents containing the same claims are then pending or issued in that same country, then Enzon shall provide Santaris with thirty (30) days prior written notice of such determination and Santaris shall have the right and opportunity to file, prosecute, defend and/or maintain such patent or patent application at Santaris’s sole cost and expense.

(d) **Prosecution and Maintenance Expenses.** Unless otherwise provided hereunder, (i) Santaris shall be responsible for one hundred percent (100%) of the costs incurred in connection with the filing, prosecution, and maintenance of LNA Platform Patents in the world and the LNA Compound Patents in the Santaris Territory (including the national or regional phase of any PCT Application), (ii) Enzon shall be responsible for one hundred percent (100%) of the costs incurred in connection with the filing, prosecution, and maintenance of Enzon Pegylation Patents and LNA Compound Patents in the Enzon Territory; and (iii) Enzon shall be responsible for 67% of the costs incurred in connection with the filing and prosecution of the priority and PCT Applications for the LNA Compound Patents and Santaris shall be responsible for 33% of such costs. Within sixty (60) days after the end of each Enzon Quarter, each Party shall submit to the other Party an accounting of all costs Enzon incurs with regard to the filing and prosecution of such priority and PCT Applications for the LNA Compound Patents during that quarter and within thirty (30) days thereafter, the applicable Party shall reimburse the other Party such amount as may be required in accordance with the foregoing agreed allocation of such costs. Upon the reasonable request of a Party, the other Party shall submit appropriate records to verify such costs.

(e) **Assistance.** Each Party shall cooperate with the other and take all reasonable additional actions and execute such agreements, instruments and documents as may

be reasonably required to perfect the other's ownership interest in accordance with this Agreement including, the execution of necessary and appropriate instruments of assignment to achieve such ownership as set forth in this Section 8.2.

### 8.3 Enforcement of Patent Rights.

(a) **Enforcement of LNA Platform Patents.** If either Party becomes aware of a suspected infringement in the Enzon Territory by a Third Party of any LNA Platform Patent licensed to Enzon under this Agreement and such potential infringement or claim relates to a Selected LNA Compound or a Product, such Party shall notify the other Party promptly, and following such notification, the Parties shall confer. Santaris shall have the sole right, but shall not be obligated, to bring an infringement action at its own expense, in its own name and entirely under its own direction and control in the Enzon Territory. Enzon, upon request of Santaris, agrees to join in any such litigation at Santaris' expense and to cooperate with Santaris in connection with such litigation.

(b) **Enforcement of Enzon Pegylation Patents.** If either Party becomes aware of a suspected infringement in the Santaris Territory by a Third Party of any Enzon Pegylation Patent licensed to Santaris under this Agreement and such potential infringement or claim relates to a Selected LNA Compound or a Product, such Party shall notify the other Party promptly, and following such notification, the Parties shall confer. Enzon shall have the sole right, but shall not be obligated, to bring an infringement action at its own expense, in its own name and entirely under its own direction and control in the Santaris Territory. Santaris, upon request of Enzon, agrees to join in any such litigation at Enzon expense and to cooperate with Enzon in connection with such litigation.

(c) **Enforcement of LNA Compound Patents.** If either Party becomes aware of a suspected infringement in the Santaris Territory or the Enzon Territory by a Third Party of any LNA Compound Patent, such Party shall notify the other Party promptly, and following such notification, the Parties shall confer. Santaris shall have the sole right, but shall not be obligated, to bring an infringement action at its own expense, in its own name and entirely under its own direction and control in the Santaris Territory. Enzon shall have the first right, but shall not be obligated, to bring an infringement action at its own expense, in its own name and entirely under its own direction and control in the Enzon Territory. Each Party, upon request of the other Party, agrees to join in any such litigation at the other Party's expense and to cooperate in connection with such litigation. If Enzon fails to prosecute any action or commence good faith settlement negotiations with respect to such alleged infringement in the Enzon Territory within **[\*\*Redacted\*\*]**, Santaris shall have the right, at such Party's sole expense, to institute any such litigation.

(d) **Recoveries.** If either Party exercises the rights conferred in this Section 8.3 in respect of LNA Compound Patents and recovers any damages or other sums in such action, suit or proceeding or in settlement thereof in respect of the Enzon Territory, such damages or other sums recovered shall first be applied to all out-of-pocket costs and expenses incurred by such Party in connection therewith, including attorneys fees. If, after such reimbursement, any funds shall remain from such damages or other sums recovered, the amount of any recovery remaining shall then be allocated: (i) if Enzon enforces,

[\*\*Redacted\*\*] to Enzon and [\*\*Redacted\*\*] to Santaris, and (ii) if Santaris enforces, [\*\*Redacted\*\*] to each Party.

**8.4 Limitations.** Notwithstanding the terms of Sections 8.2 and 8.3, all rights of Enzon, and all obligations of Santaris, under Sections 8.2 and 8.3 shall be subject to any restrictions on Santaris's rights under the Third Party Licenses.

**8.5 Defense of Third Party Claims.** Each of the Parties shall promptly notify the other if of any legal or administrative action by any Third Party against an LNA Platform Patent, Enzon Pegylation Patent or LNA Compound Patent, of which it becomes aware and where such claim relates to a Selected LNA Compound or a Product, including any nullity, revocation, reexamination, or compulsory license proceeding. Enzon shall have the sole right, but no obligation, to defend against any such action involving an Enzon Pegylation Patent, in its own name, and any such defense shall be at Enzon's expense. Santaris, upon request of Enzon, agrees to join in any such action at Enzon's expense and in any event to cooperate with Enzon at Enzon's expense. Santaris shall have the sole right, but no obligation, to defend against any such action involving an LNA Platform Patent, in its own name, and any such defense shall be at Santaris's expense. Enzon, upon request of Santaris, agrees to join in any such action at Santaris's expense and in any event to cooperate with Santaris at Santaris's expense. Each Party shall have the first right, but no obligation, to defend against any such action involving an LNA Compound Patent in its respective Territory. The defense of any such action involving an LNA Compound Patent in the Enzon Territory shall be at Enzon's sole cost and expense and the defense of any such action involving an LNA Compound Patent in the Santaris Territory shall be at Santaris's sole cost and expense. Each Party, upon request of the other Party, agrees to join in any such action and in any event to cooperate with the other Party. If Enzon fails to defend against any such action involving an LNA Compound Patent, then Santaris shall have the right to defend such action.

**8.6 Hatch-Waxman Certification.** If either Party receives a notice under 21 U.S.C. §355(b)(2)(A)(iv) or 355(j)(2)(A)(vii)(IV) or comparable laws or regulations applicable to biological products ("**Paragraph IV Notice**") relating to a Product and concerning an LNA Compound Patent, then it shall use reasonable efforts to provide a copy of such notice to the other Party within two (2) Business Days after its receipt thereof and best efforts to provide such copy as promptly as practicable thereafter. Each of the Parties shall have the same rights to initiate patent infringement litigation based on a Paragraph IV Notice as are provided in Section 8.3(c). Each Party, upon request of the other Party, shall reasonably cooperate with the requesting Party in any such litigation at the requesting Party's expense.

**8.7 Patent Term Restoration/Supplemental Protection.** The Parties shall cooperate with each other in obtaining patent term restoration, extensions or supplemental protection certificates or their equivalents in any country in the Enzon Territory where applicable to LNA Compound Patents. If elections with respect to obtaining such patent term restoration, extensions or supplemental protection certificates are to be made, Enzon shall have the right to make the election and Santaris agrees to abide by such election.

## 9. CONFIDENTIALITY

**9.1 Treatment of Confidential Information.** The Parties agree that during the Term, and for a period of five (5) years after the end of the Term, a Party receiving Confidential Information of the other Party will (a) maintain in confidence such Confidential Information to the same extent such Party maintains its own proprietary industrial information of similar kind and value (but at a minimum each Party shall use commercially reasonable efforts), (b) not disclose such Confidential Information to any Third Party without prior consent of the other Party, and (c) not use such Confidential Information for any purpose except those permitted by this Agreement.

**9.2 Exceptions.** A Party shall not have the obligations set forth in Section 9.1 with respect to any portion of such Confidential Information that it can show by adequate documentation:

- (a) is publicly disclosed by the disclosing Party, either before or after it becomes known to the receiving Party;
- (b) was known to the receiving Party, without obligation to keep it confidential, prior to when it was received from the disclosing Party;
- (c) is subsequently disclosed to the receiving Party by a Third Party lawfully in possession thereof without obligation to keep it confidential;
- (d) has been published by a Third Party; or
- (e) has been independently developed by the receiving Party without the aid, application or use of Confidential Information.

**9.3 Authorized Disclosure.** Notwithstanding Section 9.1, a Party may disclose Confidential Information belonging to the other Party to the extent such disclosure is necessary in the following instances; *provided*, however, that in the case of (c) and (d) below, the disclosing Party will seek to obtain protective orders that preserve the confidentiality of the Confidential Information to the fullest extent possible:

- (a) filing or prosecuting LNA Compound Patents for Selected LNA Compounds or Products;
- (b) Regulatory Filings for Products;
- (c) prosecuting or defending litigation relating to Selected LNA Compounds or Products;
- (d) complying with Laws; and
- (e) disclosure, in connection with the performance of this Agreement, to Affiliates, potential and actual licensees or sublicensees, employees, consultants, contractors including clinical trial investigators, or agents, each of whom prior to disclosure must be

bound by similar obligations of confidentiality and non-use at least equivalent in scope to those set forth in this Article 9.

**9.4 Agreement Terms.** The Parties acknowledge that the terms of this Agreement shall be treated as Confidential Information of both Parties and may be disclosed only as expressly permitted by this Section 9.4 or Section 9.5. Such terms may be disclosed by a Party to individuals or entities covered by Section 9.3 above, each of whom (other than a Governmental Authority) prior to disclosure must be bound by similar obligations of confidentiality and non-use at least equivalent in scope to those set forth in this Article 9. Disclosure of the terms of this Agreement (but not other Confidential Information received from the other Party) may also be made, to actual or potential bankers, lenders and investors of the disclosing Party as long as they are subject to terms of confidentiality and non-use at least equivalent in scope to those set forth in this Article 9. If Enzon or Santaris becomes aware of a breach or alleged breach by any individual referred to in Section 9.3 or 9.4 of such individual's confidentiality obligations relating to Confidential Information, then the Party that learns of such breach or alleged breach shall notify the other Party, and the Parties will use commercially reasonable efforts to enforce available remedies in respect of such breach as soon as reasonably practicable under the circumstances.

**9.5 Publicity.**

(a) The press release announcing the execution of this Agreement is set forth on **Schedule 9.5** hereto. In addition, the Parties may make public statements concerning the terms of this Agreement solely where such statements (i) are required by Law, applicable stock exchange regulation or legal proceedings, as confirmed, upon the request of a Party, by the written advice of counsel for the other Party (in which case the Party that is required to or has otherwise decided to make a public statement will disclose such statements to the other Party prior to making a public statement and, to the extent practicable, provide such other Party an opportunity to review and comment); (ii) include no greater disclosure or additional statements than were previously disclosed or made by the Parties in a public statement; or (iii) was, upon request of a Party, approved with the prior written consent of the other Party, such consent not to be unreasonably withheld or delayed; *provided* that a Party listed on a stock exchange may reasonably withhold its consent, when such statement, proposed to be made by the other Party, would cause the Party to be required, upon the written advice of counsel for the Party, pursuant to securities laws or applicable stock exchange regulation, to make a public disclosure. In addition, the Parties may make public statements concerning the progress of the Selected LNA Compounds or Products solely where such statements (i) are with respect to data generated by such Party with respect to a Selected LNA Compound or Product, including the results of the Discovery Program or preclinical or clinical studies conducted by such Party; (ii) include no greater disclosure or additional statements than were previously disclosed or made by the Parties in a public statement; or (iii) was, upon request of a Party, approved with the prior written consent of the other Party in its sole discretion. The Parties shall cause its Affiliates, officers, directors, employees, contractors and agents only to make public announcement regarding the terms of or events related to this Agreement or concerning the progress of the Selected LNA Compounds or Products according to this Section 9.5.

(b) In connection with any filing that is required by Law, applicable stock exchange regulation or legal proceedings (including any SEC filing of this Agreement), the Party required to make such filing shall endeavor to obtain confidential treatment of economic and trade secret information and shall seek the other Party's views concerning the scope of any redaction of this Agreement in any such filing. In any event, the Parties agree to take all reasonable action to avoid disclosure of Confidential Information except as permitted hereunder, and shall cooperate with each other with respect to all such disclosures.

#### 9.6 Publications.

(a) Each Party, its Affiliates or any of its or its Affiliates' employees, contractors, consultants, sublicensees or agents (i) may publish or present in a scientific journal or other scientific setting any data generated by such Party with respect to a Selected LNA Compound or Product, including the results of the Discovery Program or preclinical or clinical studies conducted by such Party, without the other Party's prior consent, and (ii) shall not publish or present in a scientific journal or other scientific setting any data generated by the other Party with respect to a Selected LNA Compound or Product, including the results of the Discovery Program or preclinical or clinical studies conducted by such other Party, without the other Party's prior written consent (which may not be unreasonably withheld or delayed). Notwithstanding the foregoing, nothing in this Section 9.6 shall be construed to limit the right of either Party's clinical investigators to publish the results of their studies; *provided*, however, that each Party's agreements with its clinical investigators shall provide such Party a reasonable amount of time, and in no event less than thirty (30) days, to review all such publications for the purpose of safeguarding intellectual property rights and Confidential Information. After such review period, either Party shall have the right to require the clinical investigator to delay publication by up to sixty (60) additional days in order to allow sufficient time for a Party to file patent applications.

(b) Santaris will promptly provide to Enzon any publications or other scientific disclosures that Santaris receives from Exiqon [\*\*Redacted\*\*], and will provide to Enzon the same written approval right over such publications and other scientific disclosures that Exiqon has granted to Santaris pursuant to that provision. Enzon will provide its approval or disapproval to Santaris which in turn will communicate such approval or disapproval to Exiqon.

### 10. TERM AND TERMINATION

**10.1 Term.** This Agreement shall continue until the earlier of (a) expiration of the last Royalty Term, and (b) the effective date of termination pursuant to Sections 10.2 or 10.3 (the "Term").

**10.2 Termination by Enzon.** Enzon may terminate the Agreement at any time in its entirety or in respect of one or more Selected LNA Compounds or Products for any reason upon one hundred twenty (120) days notice; *provided* that Santaris may then accelerate the effective date of termination to any date that is at least thirty (30) days after receiving such notice. After Santaris's receipt of any such notice from Enzon, Santaris shall have the right to discuss with Third Parties the opportunity to obtain a license or other right to Develop and

Commercialize the Products upon expiration of the relevant notice period. Additionally, Enzon shall cooperate reasonably with Santaris to provide to Santaris any Confidential Information or Know-How Controlled by Enzon relating to the Development and Commercialization of Products that may be useful to enable Santaris to enter into such discussions with such Third Parties; *provided* that such Third Party is subject to a confidentiality agreement reasonably acceptable to Enzon in respect of Enzon Technology.

**10.3 Mutual Termination Rights.** Either Party may terminate this Agreement, solely with respect to the Selected LNA Compound or Product to which a material breach relates, if:

(a) The other Party is in material breach of this Agreement, and the non-breaching Party delivers notice of such material breach to the other Party describing in detail the nature of such breach and its intent to terminate under this Section 10.3. If Enzon fails either to pay or to dispute in good faith any amounts alleged to be due and payable to Santaris hereunder within thirty (30) days after receiving written notice of such failure, Santaris may terminate this Agreement at the end of such thirty (30) day period. If the alleged breach is not for nonpayment, the allegedly breaching Party shall have ninety (90) days (or, in respect of any breach that would also be a breach under a Third Party License, such shorter time period as may be permitted under such Third Party License) from receipt of such notice to cure such breach (or, if such default cannot be cured within such ninety (90) day period, the breaching Party must commence and diligently continue actions to cure such default during such ninety (90) day period). Any such termination shall become effective at the end of such ninety (90) day period unless the breaching Party has cured any such breach or default prior to the expiration of such ninety (90) day period (or, if such default is capable of being cured but cannot be cured within such ninety (90) day period, the breaching Party has commenced and diligently continued actions to cure such default provided always that, in such instance, such cure must have occurred within one hundred eighty (180) days after notice thereof was provided to the breaching Party by the non-breaching Party to remedy such default); or

(b) Either Party may terminate this Agreement in its entirety if the other Party is generally unable to meet its debts when due, or makes a general assignment for the benefit of its creditors, or there shall have been appointed a receiver, trustee or other custodian for such Party for or a substantial part of its assets, or any case or proceeding shall have been commenced or other action taken by or against such Party in bankruptcy or seeking the reorganization, liquidation, dissolution or winding-up of such Party or any other relief under any bankruptcy, insolvency, reorganization or other similar act or Law, and any such event shall have continued for sixty (60) days undismitted, unstayed, unbonded and undischarged. In such circumstances, the other Party may, upon notice to such Party, terminate this Agreement, such termination to be effective upon such Party's receipt of such notice; or

(c) In the case of Santaris only, if Enzon or any of its Affiliates commences or otherwise, directly or indirectly, pursues (or voluntarily assists Third Parties to do so, other than as required by law or legal process) any proceeding seeking to have any of the LNA Platform Patents or LNA Compound Patents revoked or declared invalid, unpatentable, or unenforceable (other than in defense of a claim by Santaris against Enzon). In the case of Enzon only, if Santaris or any of its Affiliates commences or otherwise, directly or indirectly,

pursues (or voluntarily assists Third Parties to do so, other than as required by law or legal process) any proceeding seeking to have any of the Enzon Pegylation Patents or LNA Compound Patents revoked or declared invalid, unpatentable, or unenforceable (other than in defense of a claim by Enzon against Santaris).

(d) In the case of Santaris only and subject to Section 6.1(b), if Enzon fails to achieve the Development timelines set forth in the table in Section 6.1(a) in respect of any Enzon Target, Santaris may terminate this Agreement in respect of such Enzon Target.

**10.4 Effect of Termination.**

(a) If a Party gives notice of termination under Section 10.3 and the other Party disputes whether such notice was proper, then the issue of whether this Agreement has been terminated shall be resolved in accordance with Article 13 and each Party shall continue to perform its obligations hereunder pending the conclusion of such dispute resolution proceeding. If as a result of such dispute resolution process it is determined that the notice of termination was proper, then such termination shall be effective immediately. If as a result of such dispute resolution process, it is determined that the notice of termination was improper, then no termination shall have occurred and this Agreement shall remain in effect.

(b) **Survival.**

(i) The following provisions shall survive any expiration or termination of this Agreement: Sections 2.2 (except as otherwise expressly provided in such Section), 2.3, 6.1(i), 7.15, 8.1, 10.4 and Articles 9 (except Sections 9.5 and 9.6), 12, 13 and 14, and, to the extent necessary to give to such surviving provisions, Article 1.

(ii) Subject to Section 7.4(d), termination of this Agreement shall not relieve the Parties of any liability that accrued hereunder prior to the effective date of such termination. In addition, termination of this Agreement shall not preclude either Party from pursuing all rights and remedies it may have hereunder or at law or in equity with respect to any breach of this Agreement nor prejudice either Party's right to obtain performance of any obligation.

(c) **Licenses and Other Rights.**

(i) Upon termination of this Agreement, whether in its entirety or for a particular Selected LNA Compound or Product, by Enzon pursuant to Section 10.2 or by Santaris pursuant to Section 10.3, all licenses with respect to the applicable Selected LNA Compound or Product to Enzon under Section 2.1 shall terminate, and Enzon shall (without charge, other than reimbursement of out-of-pocket expenses):

(A) as soon as reasonably practicable after such termination, upon Santaris's request:

(x) assign to Santaris all of Enzon's right, title and interest in and to any agreements between Enzon and Third Parties that are freely assignable by Enzon, subject to assumption by Santaris of all obligations accruing thereunder thereafter,

and that relate solely to the Development or manufacture of the terminated Selected LNA Compound or Product (or, if not relating solely to the terminated Selected LNA Compound or Product, shall cooperate with Santaris to otherwise provide the benefit of such agreement); to the extent that any such agreement is not freely assignable by Enzon, then such agreement will not be assigned, and upon the request of Santaris, Enzon will cooperate in good faith and use Diligent Efforts (which shall not include the obligation to pay money or commence litigation) to allow Santaris to obtain a license or other right to the extent Enzon has the right and ability to do so;

(y) if Enzon has, as of the effective date of termination, filed an MAA for the terminated Product in the United States, grant Santaris a license to any Product Trademarks, for such Product including any registrations and design patents for such Product and any Internet domain name registrations for such trademarks and slogans, all to the extent they relate to such Product; and

(z) assign all of Enzon's right, title and interest in and to any Development Data, Regulatory Filings, Regulatory Approvals and LNA Compound Patents (or, if any such Development Data, Regulatory Filings, Regulatory Approvals and LNA Compound Patent relates to other Selected LNA Compounds or Products then being Developed or Commercialized by Enzon and not subject to such termination, Enzon agrees to grant, and hereby grants, Santaris the exclusive, perpetual, royalty-free license (with right to sublicense) under such Development Data, Regulatory Filings, Regulatory Approvals and LNA Compound Patents to develop, manufacture and commercialize all products, other than such Selected LNA Compounds or Products then being Developed or Commercialized by Enzon and not subject to such termination).

(B) upon Santaris's request, transfer to Santaris or its designee the management and continued performance of any clinical trials for the terminated Selected LNA Compound or Product which trials are ongoing as of the effective date of such termination.

(C) upon Santaris's request, if a manufacturing process for the terminated Product has been completed as of the effective date of termination for such Product, transfer the completed manufacturing process for such Product to Santaris or its designee for its use solely to manufacture such Product and subject to all Third Party rights and obligations, cooperate with Santaris, at no incremental cost to Enzon, to effect the transition of such manufacturing process, and

(D) supply Santaris with clinical and commercial quantities of the terminated Product for the shorter of (x) the period until Santaris or its designee has established and validated a manufacturing process for such Product and is approved to manufacture clinical trial and commercial supplies of such Product or (y) **[\*\*Redacted\*\*]** from the effective date of such termination; *provided*, that Santaris will reimburse Enzon for **[\*\*Redacted\*\*]** (as defined in Schedule 6.3(b)) with respect to such Product.

(E) to the extent requested by Santaris and without regard to the limitations imposed by Article 9, Enzon agrees to grant and hereby grants to Santaris,

effective upon such termination of this Agreement as a whole or with respect to a particular terminated Selected LNA Compound or Product solely for Santaris to have the exclusive right to develop, manufacture, sell, offer to sell and otherwise Commercialize the Selected LNA Compound(s) and Product(s) to which such termination relates (and Enzon shall retain the rights to the Enzon Technology for all other purposes) a non-exclusive, fully paid-up, worldwide right and license, with the right to sublicense, under the Enzon Technology; *provided*, that such license grant shall not include the Enzon Pegylation Technology unless such terminated Selected LNA Compound or Product was a Pegylated version, and then the license to the Enzon Pegylation Technology shall only be with respect to such Pegylated Selected LNA Compound and/or Pegylated Product.

(ii) If Enzon is entitled to terminate this Agreement pursuant to Sections 10.3(a) or (b), Enzon may elect, in lieu of such termination of this Agreement in its entirety, to terminate the licenses granted to Santaris under Section 2.2 (other than Section 2.2(d)); and the licenses granted to Enzon under Section 2.1 shall continue, subject to the terms and conditions of this Agreement, including any obligation to make all payments under Article 7, and Enzon will no longer be required to provide copies of changes to the Development Plan or copies of the Commercialization Plans, hold or attend meetings of the JSC or any other committee or project team, or share any Development Data or Regulatory Filings with Santaris. In such case, Enzon shall remain liable for the Event Milestone Payments, royalties and other payments due under Article 7, however, Enzon may offset against such payment obligations any contract damages that are determined to be due to Enzon pursuant to Article 13.

(d) Enzon will cooperate in any reasonable manner requested by Santaris, at Santaris's sole cost and expense, to achieve a smooth and expeditious transition of the development, manufacturing, marketing, and sales of the terminated Products to Santaris or its licensees.

## **11. REPRESENTATIONS AND WARRANTIES**

**11.1 General Representations and Warranties.** Each Party represents and warrants to the other that, as of the Effective Date:

(a) it is duly organized and validly existing under the Laws of its state or country of incorporation, and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the person or persons executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate action;

(c) this Agreement is legally binding upon it and enforceable in accordance with its terms. The execution, delivery and performance of this Agreement by it does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material Law of any Governmental Authority having jurisdiction over it;

(d) it has not granted, and will not grant during the Term of the Agreement, any right to any Third Party that would conflict with the rights granted to the other Party hereunder. It has (or will have at the time performance is due) maintained and will maintain and keep in full force and effect all agreements necessary to perform its obligations hereunder;

(e) it is aware of no action, suit or inquiry or investigation instituted by any governmental agency that questions or threatens the validity of this Agreement; and

(f) all necessary consents, approvals and authorizations of all governmental authorities and other Persons required to be obtained by such Party to enter into, or perform its obligations under, this Agreement have been obtained.

**11.2 Representations and Warranties of Santaris.** As of the Effective Date and except as set forth in **Schedule 11.2**, Santaris hereby represents and warrants to Enzon as follows:

(a) to the best of Santaris's knowledge, the issued LNA Compound Patents, LNA Platform Patents and Patents included in the Santaris Know-How are valid and enforceable, and all maintenance fees and annuities due and owed on all LNA Compound Patents, LNA Platform Patents and Patents included in the Santaris Know-How have been fully-paid;

(b) Santaris has not received any written notice or claim that Santaris is infringing or has infringed any Third Party Patent through activities related to SPC2968, SPC3042 or the LNA Platform Technology;

(c) to the best of Santaris's knowledge, no Third Party is infringing any LNA Compound Patent, LNA Platform Patent or any Patent included in the Santaris Know-How;

(d) except with respect to Patents subject to the Exiqon License and University of Copenhagen License, which Patents are listed on Schedule 1.61, Santaris is the legal and beneficial owner of all the LNA Compound Patents, LNA Platform Patents and Patents included in the Santaris Know-How, and, except for non-exclusive research licenses and other licenses or rights reserved to the licensor or others under the Third Party Licenses, no other person, firm, corporation or other entity has any right, interest or claim in or to, and Santaris has not entered into any agreement granting any right, interest or claim in or to, the LNA Compound Patents, LNA Platform Patents and Patents included in the Santaris Know-How;

(e) Schedules 1.57 and 1.61 contain a complete and correct list as of the Effective Date of all LNA Platform Patents, LNA Compound Patents and Patents included in the Santaris Know-How that cover rights licensed to Enzon in this Agreement, and indicates whether such patent or patent application is owned by or licensed by Santaris;

(f) the Exiqon License as heretofore delivered by Santaris to Enzon represent the complete agreement and understanding between Exiqon and Santaris relating to the Santaris Technology that is the subject of the Exiqon License. The University of

Copenhagen License as heretofore delivered by Santaris to Enzon represents the complete agreement and understanding between Santaris and the University of Copenhagen relating to the Santaris Technology that is the subject of the University of Copenhagen License. The Chugai License as heretofore made available by Santaris to Enzon represents the complete agreement and understanding between Exiqon and Chugai relating to the Santaris Technology that is the subject of the Chugai License. None of the Exiqon License, University of Copenhagen License or Chugai License has been modified, supplemented or amended, other than by amendments thereto provided to Enzon prior to the Effective Date. **[\*\*Redacted\*\*]**;

(g) each of the Exiqon License, University of Copenhagen License and the Chugai License is in full force and effect, all payments to date required to be made thereunder by Santaris or Exiqon, as applicable, have been made, and Santaris and Exiqon, as applicable, are in compliance in all material respects with their respective obligations thereunder;

(h) except as provided in any of the Third Party Licenses, none of the LNA Compound Patents, LNA Platform Patents or Patents included in the Santaris Know-How contain claims covering inventions developed with funding from the United States government or any other governmental entity;

(i) each of the existing LNA Compound Patents, LNA Platform Patents and Patents included in the Santaris Know-How is free of any lien, encumbrances, charge, security interest, mortgage or other similar restriction;

(j) Santaris and its Affiliates have disclosed to Enzon all material information generated by or for it with respect to the safety and efficacy of each of SPC2968 and SPC3042;

(k) Santaris and its Affiliates have disclosed to Enzon all material correspondence and contact information between each of them and the FDA and any other Regulatory Authorities regarding each of SPC2968 and SPC3042; and

(l) all inventors of any LNA Platform Patents, LNA Compound Patents and Patents included in the Santaris Know-How have executed assignments of their inventions in favor of Santaris, and all such assignments are valid and enforceable.

**11.3 Licenses.** Santaris covenants and agrees with Enzon that Santaris: (a) shall not execute or otherwise permit, and shall cause its Affiliates to refrain from executing or otherwise permitting, any amendment, modification or waiver to any of the Third Party Licenses that would adversely affect Enzon's rights hereunder without the prior written consent of Enzon, (b) shall not make any election or exercise any right or option (or omit to take any action which would), and shall cause its Affiliates to refrain from making any election or exercising any right or option (or omitting to take any action which would), terminate or relinquish in whole or in part of any Third Party License that would adversely affect Enzon's rights hereunder, (c) shall comply, and shall cause its Affiliates to comply, with all of its or its Affiliates' obligations under the Third Party Licenses in all material respects, (d) shall take, and shall cause its Affiliates to take, such actions as shall be necessary to keep in full force and effect the Third Party Licenses; and (e) shall give prompt notice to Enzon,

together with a review of outstanding issues, of any actual or alleged defaults, breaches, violations, proposed amendments or proposed modifications of, or any proposed waivers under, any of the Third Party Licenses by any of the parties to the Licenses.

**11.4 Disclaimer Concerning Technology.** EACH PARTY EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, EXCEPT FOR THOSE SET FORTH IN THIS AGREEMENT, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICES, IN ALL CASES WITH RESPECT THERETO. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, (A) BOTH PARTIES ACKNOWLEDGE AND AGREE THAT, NOTWITHSTANDING THE DILIGENT EFFORTS OF THE PARTIES, THE ACTIVITIES TO BE CONDUCTED UNDER THE RESEARCH PROGRAM AND ANY DEVELOPMENT PLAN PREPARED BY ENZON ARE INHERENTLY UNCERTAIN, AND THAT THERE ARE NO ASSURANCES THAT THE PARTIES WILL SUCCESSFULLY IDENTIFY A DRUG CANDIDATE OR THAT ANY SUCH CANDIDATE WILL BE SUCCESSFULLY DEVELOPED AND COMMERCIALIZED BY ENZON AS A PRODUCT; AND (B) EACH PARTY EXPRESSLY DISCLAIMS ANY REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, TO THE CONTRARY.

## 12. INDEMNITIES

**12.1 Mutual Indemnification.** Subject to Section 12.4, each Party hereby agrees to indemnify, defend and hold the other Party, its Affiliates, its licensees, its licensors, and its and their officers, directors, employees, consultants, contractors, sublicensees and agents (and, in case of such licensors, their trustees, faculty, medical and professional staff and students) (collectively, “**Representatives**”) harmless from and against any and all damages or other amounts payable to a Third Party claimant, as well as any reasonable attorneys’ fees and costs of litigation (collectively, “**Damages**”) arising out of or resulting from any claim, suit, proceeding or cause of action (each, a “**Claim**”) brought by a Third Party against a Party or its Representatives based on: (a) breach of any representation or warranty by the Indemnifying Party contained in this Agreement, (b) breach of any applicable Law by such Indemnifying Party, or (c) gross negligence or willful misconduct by such Indemnifying Party, its Affiliates, or their respective employees, contractors or agents.

### 12.2 Indemnification by a Party.

(a) Subject to Section 12.4, Enzon hereby agrees to indemnify, defend and hold Santaris, its licensors and their Representatives harmless from and against any Damages resulting from Claims brought by a Third Party against Santaris or its Representatives resulting directly or indirectly from Enzon’s Development or Commercialization of any Product by Enzon, its Affiliates, licensees or sublicensees, including Claims by a Third Party alleging patent infringement with respect to the manufacture, use, sale, offer for sale or importation of a Selected LNA Compound or Product in the Enzon Territory, except to the extent that such Damages are covered by Santaris’s indemnification of Enzon pursuant to Section 12.1 or 12.3.

(b) Subject to Section 12.4, Santaris hereby agrees to indemnify, defend and hold Enzon and its Representatives harmless from and against any Damages resulting from Claims brought by a Third Party against Enzon or its Representatives resulting directly or indirectly from Santaris's Development or Commercialization of any Product by Santaris, its Affiliates, licensees or sublicensees, including Claims by a Third Party alleging patent infringement with respect to the manufacture, use, sale, offer for sale or importation of a Selected LNA Compound or Product in the Santaris Territory or the Development or Commercialization of any LNA Compound or Product, rights to which have reverted from Enzon back to Santaris, except to the extent that such Damages are covered by Enzon's indemnification of Santaris pursuant to Section 12.1.

### 12.3 [\*\*Redacted\*\*].

**12.4 Conditions to Indemnification.** If any Third Party asserts a Claim with respect to any matter for which a Party (the "Indemnified Party") is entitled to indemnification hereunder (a "Third Party Claim"), then the Indemnified Party shall promptly notify the Party obligated to indemnify the Indemnified Party (the "Indemnifying Party") thereof; *provided, however*, that no delay on the part of the Indemnified Party in notifying the Indemnifying Party shall relieve the Indemnifying Party from any obligation hereunder unless (and then only to the extent that) the Indemnifying Party is prejudiced thereby.

(a) The Indemnifying Party shall have the right, exercisable by notice to the Indemnified Party within ten (10) Business Days of receipt of notice from the Indemnified Party of the commencement of or assertion of any Third Party Claim, to assume direction and control of the defense, litigation, settlement, appeal or other disposition of the Third Party Claim (including the right to settle the claim solely for monetary consideration) with counsel selected by the Indemnifying Party and reasonably acceptable to the Indemnified party; *provided*, that the Indemnifying Party shall obtain the prior consent of any such Indemnified Party as to any settlement that would materially diminish or materially adversely affect the scope, exclusivity or duration of any Patents licensed under this Agreement, would require any payment by such Indemnified Party, would require an admission of legal wrongdoing in any way on the part of an Indemnified Party or would effect an amendment of this Agreement.

(b) In the case of a Claim under Section 12.3(a), Enzon shall notify Santaris if such a Claim is commenced or threatened. Enzon shall assume control of the defense, litigation, settlement, appeal or other disposition of such a Claim with counsel selected by Enzon and reasonably acceptable to Santaris; *provided*, that Enzon shall keep Santaris reasonably informed as to the status of such Claim and negotiations in respect thereof, shall consult with Santaris from time to time about material matters and consider in good faith any views expressed by Santaris, Santaris shall have the right to participate in the defense of such Claim at its expense, and Enzon shall obtain the prior consent of Santaris as to any settlement thereof (such consent not to be reasonably withheld).

(c) Within ten (10) Business Days after the Indemnifying Party has given notice to the Indemnified Party of its intended exercise of its right to defend a Third Party Claim, the Indemnifying Party shall be entitled, at its sole cost and expense, to assume and conduct such defense, with counsel selected by the Indemnifying Party and reasonably acceptable to the Indemnified Party. During such time as the Indemnifying Party is controlling the defense of such Third Party Claim, the Indemnified Party shall cooperate, and cause its Affiliates and agents to cooperate upon request of the Indemnifying Party in the defense or prosecution of the Third Party Claim, including by furnishing such records, information and testimony and attending such conferences, discovery proceedings, hearings, trials or appeals as may reasonably be requested by the Indemnifying Party. If the Indemnifying Party does not notify the Indemnified Party of the Indemnifying Party's intent to defend any Third Party Claim within ten (10) Business Days after notice thereof, the Indemnified Party may (without further notice to the Indemnifying Party) undertake the defense thereof with counsel of its choice and at the Indemnifying Party's reasonable expense (including reasonable, out-of-pocket attorneys' fees and costs and expenses of enforcement or defense). The Indemnifying Party or the Indemnified Party, as the case may be, shall have the right to join in (including the right to conduct discovery, interview and examine witnesses and participate in all settlement conferences), but not control, at its own expense, the defense of any Third Party Claim that the other Party is defending as provided in this Agreement.

(d) In no event may an Indemnified Party settle or compromise any Third Party Claim for which it intends to seek indemnification from the Indemnifying Party hereunder without the prior consent of the Indemnifying Party, or the indemnification provided under such Section 12.1, 12.2 or 12.3 as to such Third Party Claim shall be null and void.

**12.5 Insurance.** Each Party shall maintain adequate liability insurance coverage or adequately plan for its product liability risks through self-insurance in such amounts and with such coverage as is customary for similar products in its respective Territory, including any legally mandatory insurance. Enzon shall procure and maintain such insurance as may be required in respect of the Enzon Territory to allow Santaris to comply with its obligations under the Third Party Licenses.

## 13. DISPUTE RESOLUTION

**13.1 Disputes.** The Parties recognize that a bona fide dispute as to certain matters may from time to time arise during the term of this Agreement that relate to any Party's rights or obligations hereunder. In the event of the occurrence of any dispute arising out of or relating to this Agreement, including any question regarding its existence, validity or termination, any Party may, by written notice to the other, have such dispute referred to the JSC. If the JSC is unable to resolve such dispute within thirty (30) days, the Parties shall refer such issue to their respective Chief Executive Officers for attempted resolution by good faith negotiations within thirty (30) days after such notice is received.

**13.2** If they shall be unable to resolve the dispute by negotiation by their Chief Executive Officers within thirty (30) days of the disputing Party's notice, then the dispute shall be finally settled by binding arbitration as provided below. Notwithstanding the foregoing, each Party shall be entitled to seek injunctive relief and specific performance in any court or arbitral tribunal without waiting for the expiration of any such sixty (60) day period.

**13.3 Governing Law; Arbitration.** Resolution of all disputes arising out of or related to this Agreement or the performance, enforcement, breach or termination of this Agreement and any remedies relating thereto, shall be governed by and construed under the substantive Laws of the State of New York, without regard to conflicts of law rules that would provide for application of the Law of a jurisdiction outside New York. If such controversy or claim cannot be resolved by means of negotiations as described in Section 13.1, then such controversy or claim shall be resolved by binding arbitration as provided below. The arbitration shall be conducted in English. The award of arbitration shall be final and binding

upon both Parties. Any arbitration proceeding shall be conducted in accordance with the Arbitration Rules of the London Court of International Arbitration (“LCIA”). The place of arbitration shall be London, England. The Parties hereby irrevocably and unconditionally submit to the jurisdiction of the LCIA for the purposes of the arbitration proceedings, and any counterclaims that relate in any respect to the Agreement. The arbitration shall be conducted by a panel of three persons. Within thirty (30) days after initiation of arbitration, each Party shall select one person to act as arbitrator and the two Party-selected arbitrators shall select a third arbitrator within 30 days of their appointment, which third arbitrator must be experienced in the pharmaceutical business. If the arbitrators selected by the Parties are unable or fail to agree upon the third arbitrator, the third arbitrator shall be appointed by the LCIA. The procedures specified in this Section 13.3 shall be the sole and exclusive procedures for the resolution of disputes between the Parties arising out of or relating to this Agreement; *provided*, that a Party, without prejudice to the above procedures, may seek injunctive relief or other provisional judicial relief if in its sole judgment such action is necessary to avoid irreparable damage, and *further provided* that any disputes regarding the scope, patentability, inventorship, validity or enforceability of any Patent may be submitted for resolution by a court of competent jurisdiction in the country in which such Patent was filed or issued. Despite such action the Parties will continue to participate in good faith in the procedures specified in this Section 13.3.

#### **14. MISCELLANEOUS**

**14.1 Limitation on Damages.** IN NO EVENT SHALL EITHER PARTY OR THEIR AFFILIATES BE LIABLE FOR PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY AND IRRESPECTIVE OF WHETHER SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF ANY SUCH LOSS OR DAMAGE; *PROVIDED*, THAT THIS LIMITATION SHALL NOT LIMIT THE INDEMNIFICATION OBLIGATION OF SUCH PARTY UNDER THE PROVISIONS OF ARTICLE 12 FOR SUCH DAMAGES CLAIMED BY A THIRD PARTY AND NOTHING IN THIS SECTION 14.1 IS INTENDED TO LIMIT ENZON’S PAYMENT OBLIGATIONS UNDER ARTICLE 7.

**14.2 Entire Agreement; Amendment.** This Agreement, including the exhibits attached hereto, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto and supersedes and terminates all prior agreements and understandings between the Parties, including the Confidentiality Agreement. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as are set forth herein and therein. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party.

**14.3 Force Majeure.** Both Parties shall be excused from the performance of their obligations under this Agreement to the extent that such performance is prevented by force majeure and the nonperforming Party promptly provides notice of the prevention to the other Party. Such excuse shall be continued so long as the condition constituting force majeure

continues and the nonperforming Party takes reasonable efforts to remove the condition. For purposes of this Agreement, force majeure shall include conditions beyond the control of the Parties, including, an act of God, voluntary or involuntary compliance with any regulation, Law or order of any government, war, terrorism, civil commotion, labor strike or lock-out, epidemic, failure or default of public utilities or common carriers, destruction of production facilities or materials by fire, earthquake, storm or like catastrophe; *provided, however*, the payment of invoices due and owing hereunder shall not be delayed by the payer because of a force majeure affecting the payer, unless such force majeure specifically precludes the payment process.

**14.4 Notices.** Any notices, approvals, or consents required or permitted to be given under this Agreement shall be in writing, shall specifically refer to this Agreement and shall be deemed to have been sufficiently given for all purposes if mailed by first class certified or registered mail, postage prepaid, internationally recognized express delivery service or personally delivered. Unless otherwise specified in writing, the mailing addresses of the Parties shall be as described below:

For Santaris: Santaris Pharma A/S  
Boge Alle 3  
2970 Hørsholm  
Denmark  
Facsimile: +45 4517 9800  
Attention: Chief Executive Officer

With a copy to: Wiggin and Dana LLP  
400 Atlantic Street  
P.O. Box 11032  
Stamford, CT 06911-0325  
Attention: James Farrington, Jr.  
Facsimile +1 203 363 7676

For Enzon: Enzon Pharmaceuticals, Inc.  
685 Rt. 202/206  
Bridgewater, NJ 08807  
Facsimile +1 908-575-9457  
Attention: Chief Executive Officer

With a copy to: General Counsel  
Facsimile +1 908-541-8838

**14.5 United States Dollars.** References in this Agreement to “Dollars” or “US\$” shall mean the legal tender of the United States of America.

**14.6 No Strict Construction.** This Agreement has been prepared jointly and shall not be strictly construed against either Party.

**14.7 No Third Party Beneficiaries.** This Agreement is intended to be solely for the benefit of the Parties and their respective successors and permitted assigns, and is not intended to and shall not confer, any rights or benefits on any Third Party.

**14.8 Assignment.** Neither Party shall have the right to assign this Agreement, nor any of its rights hereunder, nor delegate any of its obligations hereunder, without the prior written consent of the other Party. Notwithstanding the foregoing, each Party may assign this Agreement (i) to any purchaser of all or substantially all of its assets or to any successor entity resulting from any merger or consolidation of such Party with or into such entity, or (ii) to any of its Affiliates; *provided*, that, in the case of (ii), the assigning Party remains primarily liable for all of its obligations hereunder. Any attempt to assign this Agreement in breach of the foregoing shall be void. This Agreement shall be binding upon and inure to the benefit of the Parties hereto and each of their successors and permitted assigns.

**14.9 Counterparts.** This Agreement may be executed in two or more counterparts (including by facsimile or .pdf file) each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

**14.10 Further Actions.** Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

**14.11 Severability.** If anyone or more of the provisions of this Agreement is held to be invalid or unenforceable by any court of competent jurisdiction from which no appeal can be or is taken, the provision shall be considered severed from this Agreement and shall not serve to invalidate any remaining provisions hereof. The Parties shall make a good faith effort to replace any invalid or unenforceable provision with a valid and enforceable one such that the objectives contemplated by the Parties when entering into this Agreement may be realized.

**14.12 Interpretation.** The paragraph and other headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement. All references in this Agreement to an Article, Section or Schedule shall refer to an Article, Section or Schedule in or to this Agreement, unless otherwise stated. Any reference to any federal, national, state, local, or foreign statute or Law shall be deemed also to refer to all rules and regulations promulgated thereunder, unless the context requires otherwise. The word “including” and similar words mean “including without limitation.” The words “herein,” “hereof” and “hereunder” and other words of similar import refer to this Agreement as a whole and not to any particular Article, Section or other subdivision. References in this Agreement to “provisions of this Agreement” refer to the terms, conditions and promises contained in this Agreement taken as a whole. All references to months, quarters or years/annual are references to calendar months, calendar quarters, or calendar years, respectively, unless otherwise specified. References to the singular include the plural.

**14.13 No Waiver.** Any delay in enforcing a Party's rights under this Agreement or any waiver as to a particular default or other matter shall not constitute a waiver of such Party's rights to the future enforcement of its rights under this Agreement, excepting only as to an express written and signed waiver as to a particular matter for a particular period of time.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate originals by their proper officers as of the date and year first above written.

**SANTARIS PHARMA A/S**

**ENZON PHARMACEUTICALS, INC.**

By: /s/ Keith McCullagh  
NAME: Keith McCullagh  
TITLE: Chief Executive Officer

By: /s/ Jeffrey H. Buchalter  
NAME: Jeffrey H. Buchalter  
TITLE: President and Chief Executive  
Officer

By: /s/ Henrik Stage  
NAME: Henrik Stage  
TITLE: VP and Chief Financial Officer

By: /s/ Craig A. Tooman  
NAME: Craig A. Tooman  
TITLE: Executive Vice President, Finance and Chief Financial Officer

**EXECUTION PAGE TO SANTARIS-ENZON LICENSE AND COLLABORATION AGREEMENT**

SCHEDULE 1.57

EXISTING LNA COMPOUND PATENTS

Title	Assignee (Inventors)	US No.	European Countries & No.	Canadian No.	Japanese No.	Australian No.	Rest of World	Priority
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[1 page\*\*Redacted\*\*]

SCHEDULE 1.61

EXISTING LNA PLATFORM PATENTS

IN-LICENSED PATENTS/APPLICATIONS<sup>1</sup>

Title	Assignee (Inventors)	US No.	European Countries & No.	Canadian No.	Japanese No.	Australian No.	Rest of World	Priority
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[2 pages\*\*Redacted\*\*]

SANTARIS OWNED PATENTS/APPLICATIONS

Title	Assignee (Inventors)	US No.	European Countries & No.	Canadian No.	Japanese No.	Australian No.	Rest of World	Priority
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[2 pages\*\*Redacted\*\*]

Schedule 1.85

SANTARIS TERRITORY

Belgium	Armenia
Netherlands	Azerbaijan
Luxembourg	Belarus
United Kingdom	Bulgaria
Republic of Ireland	Estonia
France	Georgia
	Kazakhstan
Finland	Kyrgyzstan
Iceland	Latvia
Norway	Lithuania
Sweden	Moldova
Denmark	Romania
	Russia
Austria	Ukraine
Czech Republic	Uzbekistan
Germany	Albania
Hungary	Andorra
Liechtenstein	Bosnia and Herzegovina
Poland	Croatia
Slovakia	
Slovenia	Cyprus
Transylvania	Greece
Switzerland	Italy
	Macedonia (Former Yugoslav Republic of Macedonia)
	Malta
	Monaco
	Portugal
	San Marino
	Serbia and Montenegro
	Spain
	Turkey
	Vatican City

SCHEDULE 1.87

[1 page\*\*Redacted\*\*].

[1 page **\*\*Redacted\*\***].

SCHEDULE 1.96  
THIRD PARTY LICENSES

Agreement	Licensor(s)	Date
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[1 page \*\*Redacted\*\*]

**SCHEDULE 5.4A**

**COMPOUND SELECTION PROCESS**

The Accepted LNA Compounds to be delivered by Santaris to Enzon will be identified by Santaris pursuant to the selection process set forth in this Schedule.

[2 pages **\*\*Redacted\*\***]

**Design and Synthesis**

**\*\*Redacted\*\***

**Screening**

**\*\*Redacted\*\***

**Selection**

**\*\*Redacted\*\***

**Synthesis and delivery of 2 Accepted LNA Compounds to Enzon**

**\*\*Redacted\*\***

**Report**

**\*\*Redacted\*\***

COMPOUND ACCEPTANCE CRITERIA

Each of the Accepted LNA Compounds delivered by Santaris to Enzon shall satisfy the acceptance criteria set forth in this Schedule.

• [1 page\*\*Redacted\*\*]

**SCHEDULE 6.3(a)**

**SUPPLY TERMS**

**for**

**LNA MONOMERS SUPPLIED BY SANTARIS TO ENZON**

**LNA Monomers  
Supply**

Santaris will supply all requirements of LNA Monomers for the manufacture of the Selected LNA Compounds contained in Products manufactured by or for Enzon for Development purposes and for sale by Enzon and its Marketing Sublicensees in the Enzon Territory. Santaris may use Third Party contract manufacturers so long as such manufacturers are otherwise competent and reliable and such manufacturers and their facilities comply with all GMP requirements. LNA Monomers shall be supplied in accordance agreed upon specifications.

**Failure to Supply**

Santaris will use commercially reasonable efforts to maintain sufficient manufacturing capacity to meet the worldwide forecasted demand for such LNA Monomers (by Enzon, Santaris, and their Affiliates and Marketing Sublicensees). If Santaris becomes unable to supply the worldwide quantities of LNA Monomers ordered or forecasted by Enzon and Santaris (including, Affiliates and Marketing Sublicensees), then available LNA Monomers shall be allocated to Enzon in the Enzon Territory **[\*\*Redacted\*\*]** as available LNA Monomers is allocated to Santaris (and its Affiliates and Marketing Sublicensees) in the Santaris Territory.

**Purchase Price**

The purchase price for the LNA Monomers (the "*LNA Monomers Purchase Price*") will be amount equal to **[\*\*Redacted\*\*]**.

**Payments**

Santaris will submit invoices upon each shipment. Enzon will pay all invoices, plus all proper taxes, freight and other transportation charges stated thereon, within 45 days after its receipt.

**Forecasts**

The Parties will establish reasonable forecast procedures that take into account necessary lead time for manufacture and market demand for the LNA Monomers.

**Delivery**

All LNA Monomers will be delivered FCA (INCOTERMS 2000) at the place of manufacture.

**Quality**

All LNA Monomers will be manufactured in accordance with GMP and applicable product specifications. The LNA Monomers will be released in accordance with all applicable regulatory requirements and mutually acceptable product release

specifications. A Certificate of Analysis will accompany each batch of LNA Monomers. If Enzon provides prompt written notice that any LNA Monomers does not conform to any such requirements, Santaris will, at Enzon's option, replace the non-conforming LNA Monomers or refund the applicable LNA Monomers Purchase Price. An independent testing laboratory will resolve all disputes regarding the quality of the LNA Monomers.

If the LNA Monomers should be recalled, the Parties will take all appropriate corrective actions. Santaris will be responsible for all recall costs to the extent resulting from a breach of the foregoing warranties and the product supply agreement. The Parties will fully cooperate and provide all reasonable assistance in conducting any recall.

**Recalls**

**\*\*\*Redacted\*\*]**

**\*\*\*Redacted\*\*].**

**SCHEDULE 6.3(b)**

**SUPPLY TERMS  
for**

**FINISHED PRODUCT SUPPLIED BY ENZON TO SANTARIS**

**Product Supply**

Enzon will supply such quantities of Product as may be ordered by Santaris and its licensees for sale in the Santaris Territory. Such Product will be manufactured by the same process, in the same formulation(s) and conform to the same product specifications as the Product sold by Enzon in the United States. The Product shall be supplied in accordance agreed upon specifications. Enzon may use Third Party contract manufacturers so long as such manufacturers are otherwise competent and reliable and such manufacturers and their facilities comply with all GMP requirements.

**Failure to Supply**

Enzon will use commercially reasonable efforts to maintain sufficient manufacturing capacity to meet the worldwide forecasted demand for such Products (by Santaris, Enzon, and their Affiliates and Marketing Sublicensees). If Enzon becomes unable to supply the worldwide quantities of Products ordered or forecasted by Santaris and Enzon (including, Affiliates and Marketing Sublicensees), then available Product shall be allocated to Santaris in the Santaris Territory in the same proportion as available Product is allocated to Enzon (and its Affiliates and Marketing Sublicensees) in the Enzon Territory.

**Purchase Price**

The purchase price for the Product (the "*Product Purchase Price*") will be an amount equal to **[\*\*Redacted\*\*]**.

**Payments**

Enzon will submit invoices upon each shipment. Santaris will pay all invoices, plus all proper taxes, freight and other transportation charges stated thereon, within 45 days after its receipt.

**Forecasts**

The Parties will establish reasonable forecast procedures that take into account necessary lead time for manufacture and market demand for the Product.

**Delivery**

All Products will be delivered FCA (INCOTERMS 2000) at the place of manufacture.

**Quality**

All Products will be manufactured in accordance with GMP and applicable product specifications. The Product will be released in accordance with all applicable regulatory requirements and mutually acceptable product release specifications. A Certificate

of Analysis will accompany each batch of Product. If Santaris provides prompt written notice that any Product does not conform to any such requirements, Enzon will, at Santaris's option, replace the non-conforming Product or refund the applicable Product Purchase Price. An independent testing laboratory will resolve all disputes regarding the quality of the Product.

**Recalls**

If the Product should be recalled, the Parties will take all appropriate corrective actions. Enzon will be responsible for all recall costs to the extent resulting from a breach of the foregoing warranties and the product supply agreement. The Parties will fully cooperate and provide all reasonable assistance in conducting any recall.

**Labels**

All Products will be shipped in final package form with all applicable packaging labels, including all package inserts.

**[\*\*Redacted\*\*]**

**[\*\*Redacted\*\*].**

**SCHEDULE 8.2(a)**

**SANTARIS PATENT COUNTRIES**

**MAJOR PATENT WILL AS A MINIMUM BE FILED IN THE FOLLOWING COUNTRIES:**

AU Australia

CA Canada

BR Brazil

CN China

EP European Patent

IL Israel

IN India

JP Japan

KR Republic of Korea

MX Mexico

NZ New Zealand

US United States of America

**MARGINAL PATENT WILL AS A MINIMUM BE FILED IN THE FOLLOWING COUNTRIES:**

EP European Patent

JP Japan

US United States of America

**SCHEDULE 9.5**

**INITIAL PRESS RELEASE**

**ENZON AND SANTARIS PHARMA ENTER INTO GLOBAL COLLABORATION TO  
DEVELOP NOVEL CANCER THERAPEUTICS**

*Alliance Strengthens Both Companies' Oncology Pipelines*

BRIDGEWATER, NJ and COPENHAGEN, DK– July X, 2006 – Enzon Pharmaceuticals, Inc. (Nasdaq: ENZN) and Santaris Pharma A/S announced today that the companies have entered into a collaboration to co-develop and commercialize a series of innovative RNA Antagonists based on Santaris Pharma's LNA® (locked nucleic acid) technology and utilizing Enzon's oncology drug development expertise.

Under the terms of the agreement, Enzon is licensing two of Santaris Pharma's preclinical development compounds, the HIF-1 $\alpha$  antagonist (SPC2968) and the Survivin antagonist (SPC3042), and six additional proprietary RNA Antagonist candidates, all to be directed against novel oncology drug targets selected by Enzon. Enzon will have exclusive rights to develop and commercialize these compounds in the U.S. and other non-European territories. Santaris will retain exclusive rights to commercialization in Europe. The companies will share development data for use in their respective territories. Further, Enzon will have the opportunity to explore the potential for added benefit with its next-generation PEGylation Customized Linker Technology.

Enzon will make an initial up-front payment of \$8 million to Santaris Pharma, followed by an additional \$3 million upon the successful identification of certain LNA targets and additional payments on the achievement of pre-specified discovery, development and regulatory milestones, representing a potential aggregate total of more than \$200 million. Enzon will pay royalties to Santaris Pharma on net sales of RNA Antagonist products resulting from the collaboration in non-European territories.

“This very important collaboration is in line with our strategic goal of advancing our presence in oncology while leveraging our access to proprietary new technologies” said Jeffrey H. Buchalter, Enzon's chairman and chief executive officer. “This partnership will greatly enhance our R&D pipeline with the addition of two new clinical programs in the next six-to-12 months and another six preclinical compounds entering the pipeline over the next few years.”

“We are delighted to be in partnership with Enzon Pharmaceuticals, whose new management has extensive experience of developing and commercializing innovative oncology drugs, making them an ideal partner for Santaris,” said Keith McCullagh, president and chief executive officer, Santaris Pharma A/S. “Together we are committed to building a unique portfolio of RNA Antagonist drugs with the potential to address some of the underlying genetic causes of disease and improve patient outcomes in the treatment of cancer.”

### **About LNA<sup>®</sup> Technology**

LNA Technology, developed by Santaris Pharma, is based on Locked Nucleic Acid, a proprietary synthetic analog of ribonucleic acid (RNA) which is fixed in the shape adopted by RNA in helical conformation. When incorporated into a short nucleic acid chain (both DNA and RNA are made up of longer chains of natural nucleic acids), the presence of LNA results in several therapeutic advantages. Because LNA resembles RNA but is more stable, LNA-containing drugs have both very high binding affinity for RNA and metabolic stability. Using the “antisense” principle to block the function of specific RNAs within cells and tissues, such drugs have enhanced potency and specificity and may provide improved efficacy at lower doses than comparable drugs based on alternative chemistry. As a result, RNA Antagonists comprised of LNA have been demonstrated to be 100 to 1,000 times more potent *in vitro* than conventional antisense compounds and also to demonstrate more efficacy *in vivo* than the best siRNA’s (small interfering RNAs) published to date. In particular, they can be used to switch off the synthesis of harmful proteins, thereby potentially altering disease outcomes in cancer or other serious disorders.

### **About PEGylation (PEG) Technology**

Enzon’s proprietary PEG (polyethylene glycol) technology can be applied to a number of different types of molecules including proteins, peptides, antibodies, and oligonucleotides. Many of these compounds possess pharmacologic limitations, such as toxicity, poor solubility, and limited half-life. Through the chemical attachment of PEG, these limitations can potentially be overcome and a compound generated with substantially enhanced therapeutic value. Specific advantages of PEG can include increased efficacy, reduced dosing frequency, reduced toxicity, increased drug stability, and enhanced drug solubility. Enzon’s PEG expertise includes linker chemistries that are designed to incorporate a stable chemical bond between the native molecule and the PEG, as well as a Customized Linker Technology™, which is a next-generation platform that utilizes releasable linkers designed to release the native molecule at a controlled rate.

### **About Enzon Pharmaceuticals**

Enzon Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to the development and commercialization of therapeutics to treat patients with cancer and adjacent diseases. Enzon’s specialized sales force markets ABELCET®, ONCASPAR®, ADAGEN®, and DEPOCYT® in the United States. In addition, Enzon also receives royalties on sales of PEG-INTRON®, marketed by Schering-Plough Corporation, and MACUGEN®, marketed by OSI Pharmaceuticals and Pfizer Inc. Enzon’s product-driven strategy includes an extensive drug development program that leverages its proprietary technologies, including a Customized Linker Technology™ PEGylation platform that utilizes customized linkers designed to release compounds at a controlled rate. Enzon also utilizes contract manufacturing opportunities to broaden its revenue base and enhance its organizational productivity. Enzon complements its internal research and development efforts with strategic initiatives, such as partnerships designed to broaden its revenue base or provide access to promising new technologies or product development opportunities. Further information about Enzon and this press release can be found on the Company’s Web site at [www.enzon.com](http://www.enzon.com).

## **About Santaris Pharma**

Santaris Pharma A/S is a clinical-stage biopharmaceutical company focussed on developing next generation RNA-silencing drugs based on its proprietary LNA<sup>®</sup> (Locked Nucleic Acid) technology for the treatment of cancer, metabolic diseases and genetic disorders. Created in May 2003 and backed by a broad group of leading international life-science venture capital investors, Santaris Pharma completed a 40m Euro second round equity investment in May 2006.

The Company's drug pipeline is comprised of novel RNA Antagonist drugs based on its unique LNA<sup>®</sup> chemistry. LNA<sup>®</sup> drugs, with their high potency and biostability, have the potential to transform the field of RNA inhibiting therapeutics, making specific and effective gene silencing a reality in human medicine. If this potential is realised, even in part, it may be possible to design new drugs to treat a wide variety of human diseases by switching off the expression of harmful genes. Santaris Pharma holds the world wide patent rights to the exploitation of LNA<sup>®</sup> in pharmaceuticals and presently has three drugs in preclinical or clinical development. The lead drug candidate, SPC2996, is currently undergoing an international, multicentre, phase I/II clinical study in Chronic Lymphocytic Leukemia (CLL). For further company information see [www.santaris.com](http://www.santaris.com)

## ***Forward Looking Statement***

*This announcement contains forward-looking statements that are not based on historical fact, including without limitation statements containing the words "believes," "may," "plans," "will," "estimate," "continue," "anticipates," "intends," "expects," and similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be materially different from the future results, events or developments discussed above. Such factors include, but are not limited to the timing of, success, and cost of clinical studies; the ability to obtain regulatory approval of products; and those described in Enzon's Form 10-K and Forms 10-Q on file with the United States Securities and Exchange Commission. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. All information in this press release is as of July 27, 2006 and Enzon and Santaris undertake no duty to update this information.*

###

## SCHEDULE 11.2

### SCHEDULE OF EXCEPTIONS

In confirmation of verbal disclosures to Enzon management, Santaris Pharma makes the following written disclosure.  
[2 pages\*\*Redacted\*\*]

- 1) At a meeting between representatives of Exiqon, Santaris Pharma and Professor Imanishi, held in Osaka on July 4<sup>th</sup>, 2006, agreement was reached and confirmed in writing in a Memorandum of Understanding thereafter, to the following effect:  
[\*\*Redacted\*\*]
- 2) At a meeting with Chugai Pharmaceuticals in Tokyo on July 6<sup>th</sup>, 2006, Chugai confirmed as follows:  
[\*\*Redacted\*\*]
- 3) These changes to Third Party Licenses are subject to contract but it is the intent of the parties involved to complete the transaction prior to the end of 2006.  
[\*\*Redacted\*\*]

[1 page\*\*Redacted\*\*]

**CONFIDENTIAL TREATMENT REQUESTED**

CONFIDENTIAL TREATMENT REQUESTED: INFORMATION FOR WHICH CONFIDENTIAL TREATMENT HAS BEEN REQUESTED IS OMITTED AND IS NOTED AS FOLLOWS **\*\*REDACTED\*\***. AN UNREDACTED VERSION OF THIS DOCUMENT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

**AMENDMENT TO  
LICENSE AND COLLABORATION AGREEMENT**

**THIS AMENDMENT TO LICENSE AND COLLABORATION AGREEMENT** (this “**Amendment**”), is entered into this \_\_\_ day of **June 2007** (the “**Effective Date**”) by and between **Santaris Pharma A/S**, a Danish corporation having its principal place of business at Hørsholm, Denmark (“**Santaris**”), and **Enzon Pharmaceuticals, Inc.**, a Delaware corporation having its principal place of business at Bridgewater, New Jersey 08807 (“**Enzon**”). Santaris and Enzon may be referred to herein individually as a “**Party**” or collectively, as the “**Parties**”.

**BACKGROUND**

WHEREAS, Enzon and Santaris entered into the License and Collaboration Agreement dated July 26, 2006 (the “**Agreement**”); and

WHEREAS, Enzon and Santaris desire to amend and restate certain provisions of the Agreement.

NOW, THEREFORE, in consideration of the covenants and obligations expressed herein and intending to be legally bound, and otherwise bound by proper and reasonable conduct, the Parties agree as follows:

1. Capitalized terms used herein and not otherwise defined shall have the meanings given to them in the Agreement.
2. Section 5.3 of the Agreement is hereby amended and restated in its entirety as follows:

**Generation and Delivery of LNA Compounds.** Following the designation of the Additional Targets, Santaris shall then, at its sole cost and expense, use its Diligent Efforts to design, identify, synthesize, screen and select in cell culture LNA Compounds that meet the applicable Compound Acceptance Criteria and to generate and deliver to Enzon LNA Compounds for all Additional Targets in roughly equal intervals within a **\*\*Redacted\*\*** period; provided, however, if Santaris has successfully generated such LNA Compounds more frequently than **\*\*Redacted\*\*** every **\*\*Redacted\*\***, Santaris may elect to deliver such LNA Compounds to Enzon.

3. The third sentence of Section 5.4 of the Agreement is hereby amended and restated in its entirety as follows:
-

Upon delivery by Santaris of at least **Redacted** of substance for at least two (2) LNA Compounds meeting the applicable Compound Acceptance Criteria for an Additional Target (each of which is an “**Accepted LNA Compound**”), Enzon shall pay the amount required under Section 7.3; provided, however, in the event that Santaris elects to deliver the LNA Compounds to Enzon more frequently than **Redacted** every **Redacted** pursuant to Section 5.3, Enzon shall not be required to pay the amount required under Section 7.3 more than **Redacted** in any **Redacted** period pursuant to the terms of Section 7.3.

4. The second sentence of Section 5.5 of the Agreement is hereby amended and restated in its entirety as follows:

Enzon shall use its Diligent Efforts to determine, within **Redacted** after delivery of the Accepted LNA Compound against each Additional Target from Santaris, whether it wishes to select any Accepted LNA Compound to commence pre-clinical toxicology studies; provided, however, if Santaris delivers the Accepted LNA Compound for more than one Additional Target in any **Redacted** period, Enzon shall have an additional period of time equal to the amount of time such Accepted LNA Compound was delivered earlier than expected. For example, if Santaris delivers Accepted LNA Compound against the sixth Additional Target in the **Redacted** following the designation of the Additional Targets, Enzon shall have **Redacted** from such delivery to make such determination.

5. The table in Section 6.1(a) of the Agreement is hereby amended and restated in its entirety as follows:

Development Milestone	Time to Achieve
<b>Redacted</b>	<b>Redacted</b> after delivery (or such longer period of time as extended pursuant to Section 5.5) by Santaris of the Accepted LNA Compound
<b>Redacted</b>	(a) <b>Redacted</b> in respect of <b>Redacted</b>  (b) <b>Redacted</b> after the <b>Redacted</b> in respect of <b>Redacted</b> ; and

Development Milestone	Time to Achieve
	(c) in respect of other Selected LNA Compounds, <b>[**Redacted**]</b> after <b>[**Redacted**]</b>

6. Section 7.3 of the Agreement is hereby amended and restated in its entirety as follows:

**Selected LNA Compound Acceptance Fees.** Within thirty (30) days after the delivery by Santaris of at least **[\*\*Redacted\*\*]** of LNA Compounds meeting the Compound Acceptance Criteria for an Additional Target pursuant to Section 5.4, Enzon shall pay US**[\*\*Redacted\*\*]** with respect to each of six (6) Additional Targets; *provided*, however, in the event that Santaris elects to deliver the LNA Compounds meeting the Compound Acceptance Criteria for more than one Additional Target in any **[\*\*Redacted\*\*]** period, Enzon shall not be required to pay the amount required under this Section 7.3 more than once in any **[\*\*Redacted\*\*]** period. For example, if Santaris delivers at least **[\*\*Redacted\*\*]** of LNA Compounds meeting the Compound Acceptance Criteria for two Additional Targets on **[\*\*Redacted\*\*]** and delivers another **[\*\*Redacted\*\*]** of LNA Compounds meeting the Compound Acceptance Criteria for the **[\*\*Redacted\*\*]** Additional Target on **[\*\*Redacted\*\*]**, Enzon shall owe Santaris a payment on **[\*\*Redacted\*\*]** for the **[\*\*Redacted\*\*]** Additional Target, a payment on **[\*\*Redacted\*\*]** for the **[\*\*Redacted\*\*]** Additional Target, and a payment on **[\*\*Redacted\*\*]** of the following year for the **[\*\*Redacted\*\*]** Additional Target. If the first Event Milestone Payment payable under Section 7.4 in respect of any Additional Target is payable before the amount payable under this Section 7.3 in respect of such Additional Target is payable, such amount payable under this Section 7.3 shall be paid at the same time as such Event Milestone Payment is payable. For the purpose of Section 10.4(b)(ii), the amounts payable under this Section 7.3 shall accrue upon delivery of such quantities of LNA Compounds meeting the Compound Acceptance Criteria for an Additional Target, even if the payment may be deferred as provided above.

7. Except as set forth in this Amendment, the Agreement shall remain in full force and effect.

8. Resolution of all disputes arising out of or related to this Amendment or the performance, enforcement, breach or termination of this Amendment and any remedies relating thereto, shall be governed by and construed under the substantive Laws of the State of New York, without regard to conflicts of law rules that would provide for application of the Law of a jurisdiction

outside New York. To the extent there is any such dispute, such dispute will be handled in accordance with the procedures set forth in Section 13 of the Agreement.

9. This Amendment may be executed in two or more counterparts (including by facsimile or .pdf file) each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

*[Remainder of Page Intentionally Left Blank]*

IN WITNESS WHEREOF, the Parties have executed this Amendment in duplicate originals by their proper officers as of the date and year first above written.

**SANTARIS PHARMA A/S**

**ENZON PHARMACEUTICALS, INC.**

By: /s/ Keith McCullagh

By: /s/ Ivan Horak

NAME: Keith McCullagh  
TITLE: Chief Executive Officer

NAME: Ivan Horak  
TITLE: Chief Scientific Officer

By: /s/ Henrik Stage

NAME: Henrik Stage  
TITLE: Chief Financial Officer

**EXECUTION PAGE TO SANTARIS-ENZON AMENDMENT TO LICENSE AND COLLABORATION AGREEMENT**

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**CONFIDENTIAL TREATMENT REQUESTED**

CONFIDENTIAL TREATMENT REQUESTED: INFORMATION FOR WHICH CONFIDENTIAL TREATMENT HAS BEEN REQUESTED IS OMITTED AND IS NOTED AS FOLLOWS **\*\*REDACTED\*\***. AN UNREDACTED VERSION OF THIS DOCUMENT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

**AMENDMENT NO. 2**

**AMENDMENT TO  
LICENSE AND COLLABORATION AGREEMENT**

**THIS AMENDMENT TO LICENSE AND COLLABORATION AGREEMENT** (this “**Amendment**”), is entered into this **25<sup>th</sup>** day of **June 2007** (the “**Effective Date**”) by and between **Santaris Pharma A/S**, a Danish corporation having its principal place of business at Hørsholm, Denmark (“**Santaris**”), and **Enzon Pharmaceuticals, Inc.**, a Delaware corporation having its principal place of business at Bridgewater, New Jersey 08807 (“**Enzon**”). Santaris and Enzon may be referred to herein individually as a “**Party**” or collectively, as the “**Parties**”.

**BACKGROUND**

WHEREAS, Enzon and Santaris entered into the License and Collaboration Agreement dated July 26, 2006 (the “**Agreement**”); and

WHEREAS, Enzon and Santaris desire to amend and restate certain provisions of the Agreement.

NOW, THEREFORE, in consideration of the covenants and obligations expressed herein and intending to be legally bound, and otherwise bound by proper and reasonable conduct, the Parties agree as follows:

1. Capitalized terms used herein and not otherwise defined shall have the meanings given to them in the Agreement.
2. The table in Section 6.1(a) of the Agreement is hereby amended and restated in its entirety as follows:

Development Milestone	Time to Achieve
<b>**Redacted**</b>	<b>**Redacted**</b> after delivery (or such longer period of time as extended pursuant to Section 5.5) by Santaris of the Accepted LNA Compound
<b>**Redacted**</b>	(a) <b>**Redacted**</b> in respect of <b>**Redacted**</b> ;  (b) <b>**Redacted**</b> after <b>**Redacted**</b> ; and

	(c) in respect of other Selected LNA Compounds, <b>Redacted</b> after <b>Redacted</b>
--	---

3. Except as set forth in this Amendment, the Agreement shall remain in full force and effect.
4. Resolution of all disputes arising out of or related to this Amendment or the performance, enforcement, breach or termination of this Amendment and any remedies relating thereto, shall be governed by and construed under the substantive Laws of the State of New York, without regard to conflicts of law rules that would provide for application of the Law of a jurisdiction outside New York. To the extent there is any such dispute, such dispute will be handled in accordance with the procedures set forth in Section 13 of the Agreement.
5. This Amendment may be executed in two or more counterparts (including by facsimile or .pdf file) each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

***[Remainder of Page Intentionally Left Blank]***

IN WITNESS WHEREOF, the Parties have executed this Amendment in duplicate originals by their proper officers as of the date and year first above written.

**SANTARIS PHARMA A/S**

**ENZON PHARMACEUTICALS, INC.**

By: /s/ Keith McCullagh

By: /s/ Ivan Horak

NAME: Keith McCullagh  
TITLE: Chief Executive Officer

NAME: Ivan Horak  
TITLE: Chief Scientific Officer

By: /s/ Henrik Stage

NAME: Henrik Stage  
TITLE: Chief Financial Officer

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**CONFIDENTIAL TREATMENT REQUESTED**

CONFIDENTIAL TREATMENT REQUESTED: INFORMATION FOR WHICH CONFIDENTIAL TREATMENT HAS BEEN REQUESTED IS OMITTED AND IS NOTED AS FOLLOWS \*\*REDACTED\*\*. AN UNREDACTED VERSION OF THIS DOCUMENT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

**Amendment No 3****AMENDMENT TO  
LICENSE AND COLLABORATION AGREEMENT**

**THIS AMENDMENT TO LICENSE AND COLLABORATION AGREEMENT** (this “**Amendment**”), is entered into this 21 day of December **2007** (the “**Effective Date**”) by and between **Santaris Pharma A/S**, a Danish corporation having its principal place of business at Hørsholm, Denmark (“**Santaris**”), and **Enzon Pharmaceuticals, Inc.**, a Delaware corporation having its principal place of business at Bridgewater, New Jersey 08807 (“**Enzon**”). Santaris and Enzon may be referred to herein individually as a “**Party**” or collectively, as the “**Parties**”.

**BACKGROUND**

WHEREAS, Enzon and Santaris entered into the License and Collaboration Agreement dated July 26, 2006 (the “**Agreement**”); and

WHEREAS, the Agreement was amended by Amendment No 1 dated 13<sup>th</sup> of June and Amendment No 2 dated 25<sup>th</sup> of June 2007.

WHEREAS, Enzon and Santaris desire to amend and restate certain provisions of the Agreement.

WHEREAS, Enzon and Santaris changed the discovery process activities to allow Enzon to make certain mini-tox studies.

NOW, THEREFORE, in consideration of the covenants and obligations expressed herein and intending to be legally bound, and otherwise bound by proper and reasonable conduct, the Parties agree as follows:

1. Capitalized terms used herein and not otherwise defined shall have the meanings given to them in the Agreement.
2. Section 5.4 of the Agreement is hereby amended and restated in its entirety as follows:

**Compound Selection.** Each LNA Compound delivered by Santaris to Enzon will be identified by Santaris pursuant to the selection process set forth in **Schedule 5.4A** (the “**Compound Selection Process**”) and shall satisfy the acceptance criteria set forth for such Additional Target in **Schedule 5.4B** (the “**Compound Acceptance Criteria**”). Following the Compound Selection Process, Santaris shall provide Enzon with written reports detailing the results of such process, including its design, synthesis, first screening efforts, second screening efforts, as well as the sequences of any and all LNA Compounds resulting from such process that meet the Compound Acceptance Criteria. Upon

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Santaris' delivery, at Santaris' cost, of [\*\*Redacted\*\*] of each of [\*\*Redacted\*\*] LNA Compounds that meet the Compound Acceptance Criteria each of which is an "Accepted LNA Compound" for Enzon's [\*\*Redacted\*\*] (which LNA Compounds shall satisfy the obligations of Santaris under Section 5.3), Enzon shall pay the required amount under Section 7.3; provided, however, in the event that Santaris elects to deliver the LNA Compounds to Enzon more frequently than with respect to [\*\*Redacted\*\*] Additional Target every [\*\*Redacted\*\*] pursuant to Section 5.3, Enzon shall not be required to pay the amount required under Section 7.3 more than once in any [\*\*Redacted\*\*] period pursuant to the terms of Section 7.3. Following Enzon's [\*\*Redacted\*\*], which shall last no longer than [\*\*Redacted\*\*], Santaris shall at Santaris' cost provide Enzon with one and [\*\*Redacted\*\*] of substance for [\*\*Redacted\*\*] LNA Compounds (identified by Enzon) meeting the applicable Compound Acceptance Criteria for an Additional Target (each of which is an Accepted LNA Compound). Enzon shall have the right to synthesize or have synthesized by a Third Party, at Enzon's sole cost, additional quantities of any and all LNA Compounds delivered by Santaris, as well as quantities of any additional LNA Compounds disclosed in the written reports provided by Santaris pursuant to this Section 5.4 that also meet the applicable Compound Acceptance Criteria (each such additional LNA Compound synthesized by or for Enzon, if any shall also be an Accepted LNA Compound).

3. Section 5.5 of the Agreement is hereby amended and restated in its entirety as follows:

**In-Vitro and In-Vivo Profiling by Enzon.** Enzon shall conduct such additional *in-vitro* and *in-vivo* testing as it deems appropriate in its sole discretion to select Accepted LNA Compounds for further Development. Enzon shall use its Diligent Efforts to determine, within [\*\*Redacted\*\*] after delivery of [\*\*Redacted\*\*] of substance for [\*\*Redacted\*\*] LNA Compounds (identified by Enzon) Accepted LNA Compound against each Additional Target from Santaris, whether it wishes to select any Accepted LNA Compound to commence [\*\*Redacted\*\*]; provided, however, if Santaris delivers the Accepted LNA Compound for more than [\*\*Redacted\*\*] Additional Target in any [\*\*Redacted\*\*] period, Enzon shall have an additional period of time equal to the amount of time such Accepted LNA Compound was delivered earlier than expected. For example, if Santaris delivers Accepted LNA Compound against the [\*\*Redacted\*\*] Additional Target on [\*\*Redacted\*\*], Enzon shall have [\*\*Redacted\*\*] to determine whether it wishes to select any Accepted LNA Compound to commence pre-clinical toxicology studies for Target [\*\*Redacted\*\*] and [\*\*Redacted\*\*] months for Target [\*\*Redacted\*\*]. Further, for example if Santaris delivers Accepted LNA Compound against the [\*\*Redacted\*\*] Additional Targets on [\*\*Redacted\*\*],

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Enzon shall have **[\*\*Redacted\*\*]** to determine whether it wishes to select any Accepted LNA Compound to commence **[\*\*Redacted\*\*]** for Target **[\*\*Redacted\*\*]** and **[\*\*Redacted\*\*]** for Target **[\*\*Redacted\*\*]** from such delivery to make such determination. Each such Accepted LNA Compound selected by Enzon in writing to Santaris shall be designated a “**Selected LNA Compound**”.

4. The table in Section 6.1(a) of the Agreement is hereby amended and restated in its entirety as follows:

Development Milestone	Time to Achieve
<b>[**Redacted**]</b>	<b>[**Redacted**]</b> (or such longer period of time as extended pursuant to Section 5.5) after delivery of one and one-half (1-1/2) grams of substance for two (2) LNA Compounds (identified by Enzon) Accepted LNA Compound against each Additional Target from Santaris
<b>[**Redacted**]</b>	(a) <b>[**Redacted**]</b> in respect of <b>[**Redacted**]</b> ; (b) <b>[**Redacted**]</b> after the <b>[**Redacted**]</b> ; and (c) in respect of other Selected LNA Compounds, <b>[**Redacted**]</b>

5. Section 7.3 of the Agreement is hereby amended and restated in its entirety as follows:

**Selected LNA Compound Acceptance Fees.** Within thirty (30) days after the delivery by Santaris of **[\*\*Redacted\*\*]** of each of **[\*\*Redacted\*\*]** LNA Compounds that meet the Compound Acceptance Criteria for Enzon’s **[\*\*Redacted\*\*]** for an Additional Target pursuant to Section 5.4, Enzon shall pay US**[\*\*Redacted\*\*]** with respect to each of six (6) Additional Targets; *provided*, however, in the event that Santaris elects to deliver the LNA Compounds meeting the Compound Acceptance Criteria for more than **[\*\*Redacted\*\*]** Additional Target in any **[\*\*Redacted\*\*]** period, Enzon shall not be required to pay the amount required under this Section 7.3 more than once in any **[\*\*Redacted\*\*]** period. For example, if Santaris delivers

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**[\*\*Redacted\*\*]** of each of **[\*\*Redacted\*\*]** LNA Compounds that meet the Compound Acceptance Criteria for Enzon's **[\*\*Redacted\*\*]** for **[\*\*Redacted\*\*]** Additional Targets on **[\*\*Redacted\*\*]** and delivers another **[\*\*Redacted\*\*]** of each of **[\*\*Redacted\*\*]** LNA Compounds that meet the Compound Acceptance Criteria for Enzon's **[\*\*Redacted\*\*]** for the **[\*\*Redacted\*\*]** Additional Target on **[\*\*Redacted\*\*]**, Enzon shall owe Santaris a payment on **[\*\*Redacted\*\*]** for the **[\*\*Redacted\*\*]** Additional Target, a payment on **[\*\*Redacted\*\*]** for the **[\*\*Redacted\*\*]** Additional Target, and a payment on **[\*\*Redacted\*\*]** of the **[\*\*Redacted\*\*]** for the **[\*\*Redacted\*\*]** Additional Target. If the first Event Milestone Payment payable under Section 7.4 in respect of any Additional Target is payable before the amount payable under this Section 7.3 in respect of such Additional Target is payable, such amount payable under this Section 7.3 shall be paid at the same time as such Event Milestone Payment is payable. For the purpose of Section 10.4(b)(ii), the amounts payable under this Section 7.3 shall accrue upon delivery of such quantities of LNA Compounds meeting the Compound Acceptance Criteria for an Additional Target, even if the payment may be deferred as provided above.

6. The fourth section of Schedule 5.4. A of the Agreement is hereby amended and restated in its entirety as follows:

**[\*\*Redacted\*\*]**.

7. The last section of Schedule 5.4. A of the Agreement is hereby amended and restated in its entirety as follows:

**[\*\*Redacted\*\*]**.

5. Except as set forth in this Amendment, the Agreement shall remain in full force and effect.

6. Resolution of all disputes arising out of or related to this Amendment or the performance, enforcement, breach or termination of this Amendment and any remedies relating thereto, shall be governed by and construed under the substantive Laws of the State of New York, without regard to conflicts of law rules that would provide for application of the Law of a jurisdiction outside New York. To the extent there is any such dispute, such dispute will be handled in accordance with the procedures set forth in Section 13 of the Agreement.

7. This Amendment may be executed in two or more counterparts (including by facsimile or pdf file) each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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IN WITNESS WHEREOF, the Parties have executed this Amendment in duplicate originals by their proper officers as of the date and year first above written.

**SANTARIS PHARMA A/S**

**ENZON PHARMACEUTICALS, INC.**

By: /s/ Keith McCullagh

By: /s/ Ivan Horak

NAME: Keith McCullagh  
TITLE: Chief Executive Officer

NAME: Ivan Horak  
TITLE: Chief Scientific Officer

By: /s/ Henrik Stage

By: /s/ Ralph del Campo

NAME: Henrik Stage  
Chief Financial Officer

NAME: Ralph del Campo  
TITLE: EVP Technical Operations

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**AMENDMENT TO  
OUTSTANDING AWARDS UNDER  
2001 INCENTIVE STOCK PLAN**

**March 5, 2009**

WHEREAS, the Enzon Pharmaceuticals, Inc. (the "Company") 2001 Incentive Stock Plan (the "2001 Plan") provides that the Compensation Committee of the Board of Directors of the Company (the "Committee") may amend outstanding Awards (as defined under the 2001 Plan) from time to time, provided that any amendment that is adverse to the Participant (as defined under the 2001 Plan) requires the consent of such Participant;

WHEREAS, the Committee has determined that each Award (as defined under the 2001 Plan) that is outstanding as of the date of this Amendment (collectively, the "Outstanding Awards") should be amended as provided below;

WHEREAS, the Committee has further determined that because such amendment is in no way adverse to the holders of such Awards, the consent of any such Award holder is not required;

NOW THEREFORE, each Outstanding Award is hereby amended by replacing the definition of the term "Continuing Director" in its entirety in the agreement and terms applicable to such Outstanding Award with the following:

"Continuing Director" shall mean any person who is a member of the Board of Directors of the Company, who, while such a person is a member of the Board of Directors, is not an Acquiring Person or an Affiliate or Associate of an Acquiring Person, or a representative of an Acquiring Person or of any such Affiliate or Associate, and who (A) was a member of the Board of Directors on the date of the grant of the applicable Award or (B) subsequently becomes a member of the Board of Directors with the approval of at least one-half (1/2) of the directors then in office (but excluding for this purpose any such individual whose initial assumption of office occurs as a result of either an actual or threatened election contest or other actual or threatened solicitation of proxies or consents by or on behalf of a Person).

Except as amended hereby, all Outstanding Awards shall remain in full force and effect.

ENZON PHARMACEUTICALS, INC.

By: \_\_\_\_\_  
Title:

**ENZON PHARMACEUTICALS, INC.  
2001 INCENTIVE STOCK PLAN  
NON-QUALIFIED STOCK OPTION**

**Terms and Conditions**

1. Grant of Option. The Company hereby grants Employee the right and option (the "Option") to purchase all or any part of an aggregate of the number of shares of the Company's common stock, par value \$0.01 per share (the "Common Stock") set forth on the Notice of Grant of Award, at the price per share set forth on the Notice of Grant of Award (the "Exercise Price") on the terms and conditions set forth in these Terms and Conditions and in the Plan. It is understood and agreed that the Exercise Price is the per share Fair Market Value (as defined in the Plan) of such shares on the date of these Terms and Conditions. The Option is not intended to be an Incentive Stock Option within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"). The Option is issued pursuant to the Plan and is subject to its terms. A copy of the Plan has been furnished to Employee. Employee hereby confirms he/she has received and thoroughly read the Plan. The Company invites and encourages Employee to contact any member of the Company's Human Resources Department with any questions he/she may have regarding the Plan or these Terms and Conditions.

2. Expiration. The Option shall terminate at the close of business on the termination date set forth on the Notice of Grant of Award or earlier as prescribed herein. Employee shall not have any of the rights of a shareholder with respect to the shares subject to the Option until such shares shall be issued to Employee upon the proper exercise of the Option.

3. Vesting of Option Rights. Except as otherwise provided in Section 5 of these Terms and Conditions, the Option shall become exercisable in portions in accordance with the schedule set forth on the Notice of Grant of Award, provided the Employee is employed by the Company on the vesting date in question.

4. Exercise of Option after Termination of Employment. The Option shall terminate and may no longer be exercised if Employee ceases to be employed by the Company or its subsidiaries, except that:

(a) If Employee's employment shall be terminated for any reason, voluntary or involuntary, other than for Cause (as defined in Section 6(d) hereof) or Employee's death or disability (within the meaning of Code Section 22(e)(3)), Employee may at any time within a period of 12 months after such termination exercise the Option to the extent the Option was exercisable by Employee on the date of the termination of Employee's employment.

(b) If Employee's employment is terminated for Cause, the Option shall be terminated as of the date of termination of Employee's employment.

(c) If Employee shall die while the Option is still exercisable according to its terms, or if employment is terminated because Employee has become disabled (within the meaning of Code Section 22(e)(3)) while in the employ of the Company, and Employee shall not have fully exercised the Option, such Option may be exercised at any time within 12 months after the latter of Employee's death or date of termination of employment for

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disability by Employee, by his/her personal representatives or administrators, or by his/her guardians, as applicable, or by any person or persons to whom the Option is transferred by will or the applicable laws of descent and distribution, to the extent of the full number of shares Employee was entitled to purchase under the Option on the date of death or, if earlier, date of termination for such disability.

(d) Notwithstanding the above, in no case may the Option be exercised to any extent by anyone after the termination date of the Option.

5. Acceleration of Exercisability Upon Change in Control.

(a) Notwithstanding any installment or delayed exercise provision contained in these Terms and Conditions that would result in the Option becoming exercisable in full or in part at a later date, upon the occurrence of a "Change in Control" (as defined in Section 6(a) hereof) during the time Employee is employed by the Company, then all or any portion of the Option which has not vested in accordance with the terms of Section 3 of these Terms and Conditions as of the effective date of such Change in Control (the "Non-Vested Portion") shall vest immediately prior to such effective date and the Option will continue to remain exercisable in accordance with the terms herein.

(b) if the Option is continued pursuant to Section 5(a) or 10(e) hereof, and the shares of Common Stock issuable upon exercise of the Option (to the extent the Continuing Directors have not elected either of the determinations in Section 5(c) hereof) are replaced with other equity securities, such other securities must be registered under the Securities Act of 1933 and be freely transferable under all applicable federal and state securities laws and regulations. In such event, the number of shares issuable upon exercise of the Option shall be determined by using the exchange ratio used for other outstanding shares of the Company's Common Stock in connection with the Change in Control, or if there is no such ratio, an exchange ratio to be determined by the Continuing Directors, and the exercise price per share shall be adjusted accordingly so as to preserve the same economic value in the Option as existed prior to the Change in Control. Also in the event of any such Change in Control, all references herein to the Common Stock shall thereafter be deemed to refer to the replacement equity securities issuable upon exercise of the Option, references to the Company shall thereafter be deemed to refer to the issuer of such replacement securities, and all other terms of the Option shall continue in effect except as and to the extent modified by this Section 5(b).

(c) Notwithstanding any contrary provision in these Terms and Conditions or in the Plan, if a Change in Control shall occur, the Continuing Directors in their sole discretion, and without the consent of Employee, (i) may determine that Employee shall receive, in lieu of some or all of the shares of Common Stock subject to the Option, as of the effective date of any such Change in Control, cash in an amount equal to the excess of the Fair Market Value of such shares on the effective date of such Change in Control over the Exercise Price, subject to any applicable withholding for income or payroll taxes and/or (ii) terminate the Option to the extent it is not exercised as of the date of any such Change in Control (in which event, the holder of the Option shall be provided a reasonable opportunity to exercise all or any portion of the Option prior to the effective date of the Change in Control).

6. Definitions. For purposes of these Terms and Conditions, the following terms shall have the definitions set forth below:

(a) "Change in Control" shall mean:

(i) the public announcement (which, for purposes of this definition, shall include, without limitation, a report filed pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") that any person, entity or "group", within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act, other than the Company or any of its subsidiaries, has become the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 35% or more of the combined voting power of the Company's then outstanding voting securities in a transaction or series of transactions; or

(ii) the "Continuing Directors" (as defined below) cease to constitute a majority of the Company's Board of Directors; or

(iii) the shareholders of the Company approve:

(A) any consolidation or merger of the Company in which the Company is not the continuing or surviving corporation; or

(B) any consolidation or merger of the Company following which either the Company or a corporation that, prior to the merger or consolidation, was a subsidiary of the Company, shall be the surviving entity and a majority of the then outstanding voting securities of the Company (the "Outstanding Company Voting Securities") is owned by a Person or Persons (as defined in Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended) who were not "beneficial owners" of a majority of the Outstanding Company Voting Securities immediately prior to such merger or consolidation;

other than a merger of the Company in which shareholders of the Company immediately prior to the merger have the same proportionate ownership of stock of the surviving corporation immediately after the merger; or

(iv) any sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all or substantially all of the assets of the Company; or

(v) any plan of liquidation or dissolution of the Company; or

(vi) the majority of the Continuing Directors determine in their sole and absolute discretion that there has been a change in control of the Company.

(b) “Continuing Director” shall mean any person who is a member of the Board of Directors of the Company, who, while such a person is a member of the Board of Directors, is not an Acquiring Person or an Affiliate or Associate of an Acquiring Person (each such capitalized term as defined in Section 6(c) hereof), or a representative of an Acquiring Person or of any such Affiliate or Associate, and who (i) was a member of the Board of Directors on the date of these Terms and Conditions or (ii) subsequently becomes a member of the Board of Directors with the approval of at least one-half (1/2) of the directors then in office (but excluding for this purpose any such individual whose initial assumption of office occurs as a result of either an actual or threatened election contest or other actual or threatened solicitation of proxies or consents by or on behalf of a Person).

(c) “Acquiring Person” shall mean any “person” (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) who or which, together with all Affiliates and Associates of such person, is the “beneficial owner” (as defined in Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of the Company representing 35% or more of the combined voting power of the Company’s then outstanding securities, but shall not include the Company, or any subsidiary of the Company; and “Affiliate” and “Associate” shall have the respective meanings ascribed to such terms in Rule 12b-2 promulgated under the Exchange Act.

(d) Termination of employment for “Cause” shall mean termination by the Company (or any successor company or affiliated entity with which Employee is then employed) of Employee’s employment based upon (i) the willful and continued failure by Employee substantially to perform his or her duties and obligations (other than any such failure resulting from his or her incapacity due to physical or mental illness), (ii) the Employee’s conviction or plea bargain in connection with the commission or alleged commission of any felony or gross misdemeanor involving moral turpitude, fraud or misappropriation of funds, or (iii) the willful engaging by Employee in misconduct which causes substantial injury to the Company (or any successor company or affiliated entity with which Employee is then employed), its other employees or its clients, whether monetarily or otherwise. For purposes of this paragraph, no action or failure to act on Employee’s part shall be considered “willful” unless done, or omitted to be done, by Employee in bad faith and without reasonable belief that his or her action or omission was in the best interests of the Company (or any successor company or affiliated entity with which Employee is then employed).

7. Transfer and Assignment. The Option may only be transferred or assigned in accordance with subsection 10(d) of these Terms and Conditions.

8. Method of Exercise of Option. Subject to the foregoing and the other terms and conditions hereof, and provided that the sale of the Company’s shares pursuant to such exercise will not violate any state or federal securities or other laws, the Option may be exercised in whole or in part from time to time by Employee or other proper party serving written notice of exercise on the Company at its principal office within the period during which the Option is exercisable as provided in these Terms and Conditions. The notice shall state the number of shares as to which the Option is being exercised and shall be accompanied by payment in full of the Exercise Price for all shares designated in the notice. Payment of the Exercise Price shall be made in cash (including bank check, personal check or money order payable to the Company), or, with the

approval of the Company (which may be given in its sole discretion), by delivering to the Company for cancellation shares of the Company's Common Stock already owned by Employee having a Fair Market Value equal to the full purchase price of the shares being acquired or a combination of cash and such shares.

9. Forfeiture of Option and Option Gain Resulting From Certain Activities.

(a) If, at any time that (i) is within two (2) years after the date that Employee has exercised the Option or (ii) is within two (2) years after the date of the termination of Employee's employment with the Company for any reason whatsoever while an option agreement under the Plan is in effect, whichever is longer, Employee engages in any Forfeiture Activity (as defined below) then (i) the Option shall immediately terminate effective as of the date any such activity first occurred, and (ii) any gain received by Employee pursuant to the exercise of the Option granted hereunder must be paid to the Company within 30 days of demand by the Company. For purposes hereof, the gain on any exercise of the Option shall be determined by multiplying the number of shares purchased pursuant to the Option times the excess of the Fair Market Value of a share of the Company's Common Stock on the date of exercise (without regard to any subsequent increase or decrease in the Fair Market Value) over the Exercise Price.

(b) As used herein, Employee shall be deemed to have engaged in a Forfeiture Activity if Employee (i) breaches any non-compete or non-disclosure agreement between the Company and the Employee or (ii) fails to hold in a fiduciary capacity for the benefit of the Company all confidential, proprietary or trade secret information, knowledge and data, including research and development information, financial information, sales or marketing information, technical information customer lists and information, business plans and business strategy ("Confidential Data") relating in any way to the business of the Company for so long as such Confidential Data remains confidential.

(c) If any court of competent jurisdiction shall determine that the foregoing forfeiture provision is invalid in any respect, the court so holding may limit such covenant either or both in time, in area or in any other manner which the court determines such that the covenant shall be enforceable against Employee. Employee acknowledges that the remedy of law for any breach of the covenant not to compete referenced above will be inadequate to protect the Company's interests and compensate for the harm flowing from such breach, and that the Company shall be entitled, in addition to any remedy of law, to preliminary and permanent injunctive relief.

10. Miscellaneous.

(a) In the event that any provision of these Terms and Conditions conflicts with or is inconsistent in any respect with the terms of the Plan, the terms of the Plan shall control.

(b) Neither the Plan nor these Terms and Conditions shall (i) be deemed to give any individual a right to remain an employee of the Company, (ii) restrict the right of the

Company to discharge any employee, with or without cause, or (iii) be deemed to be a written contract of employment.

(c) The exercise of all or any parts of the Option shall only be effective at such time that the sale of shares of Common Stock pursuant to such exercise will not violate any state or federal securities or other laws.

(d) The Option shall not be transferred, except by will or the laws of descent and distribution to the extent provided in Section 4(c), and, except for as provided in the Plan or these Terms and Conditions, during the Employee's lifetime the Option is exercisable only by the Employee. Notwithstanding the foregoing, Employee may transfer the Option to any Family Member, provided, however, that (i) Employee may not receive any consideration for such transfer, (ii) the Family Member must agree in writing not to make any subsequent transfers of the Option other than by will or the laws of the descent and distribution and (iii) the Company receives prior written notice of such transfer. For purposes of this Section 10(d), the definition of "Family Member" shall be the definition adopted by the Committee administering the Plan as of the date of the attempted transfer of the Option.

(e) In accordance with Section 4(C) of the Plan, the Award shall be subject to adjustment in the event that any distribution, recapitalization, reorganization, merger or other event covered by Section 4(C) of the Plan shall occur; provided, however, that the number of shares subject to the Option shall always be a whole number.

(f) The Company shall at all times during the term of the Option reserve and keep available such number of shares of the Company's Common Stock as will be sufficient to satisfy the requirements of these Terms and Conditions.

(g) In order to provide the Company with the opportunity to claim the benefit of any income tax deduction which may be available to it upon the exercise of the Option and in order to comply with all applicable federal or state income tax laws or regulations, the Company may take such action as it deems appropriate to insure that, if necessary, all applicable federal or state payroll, withholding, income or other taxes are withheld or collected from Employee.

(h) The Company, in its sole and absolute discretion, may allow Employee to satisfy Employee's federal and state income tax withholding obligations upon exercise of the Option by (i) having the Company withhold a portion of the shares of Common Stock otherwise to be delivered upon exercise of the Option having a Fair Market Value equal to the amount of federal and state income tax required to be withheld upon such exercise, in accordance with such rules as the Company may from time to time establish, or (ii) delivering to the Company shares of its Common Stock other than the shares issuable upon exercise of the Option with a Fair Market Value equal to such taxes, in accordance with such rules.

ENZON PHARMACEUTICALS, INC.  
NOTICE OF GRANT OF AWARD

NON-QUALIFIED STOCK OPTION

Grant Date: xx/xx/xx

Certificate No. xxxxxxxx

Summary Grant Information	
RECIPIENT:	
NUMBER OF SHARES:	
EXERCISE PRICE:	
PLAN:	2001 Incentive Stock Plan (the "Plan")
TERMINATION DATE:	(subject to earlier termination, as set forth in the Terms and Conditions)

Vesting Information	
Date	Number of Shares as to which the Option Becomes Exercisable

In accordance with the terms and conditions of the Plan and as a condition to the Award set above, the Employee agrees to the provisions set forth in the Terms and Conditions attached hereto.

ENZON PHARMACEUTICALS, INC.

By: \_\_\_\_\_  
Paul Davit  
Executive Vice President, Human Resources

**ENZON PHARMACEUTICALS, INC.  
2001 INCENTIVE STOCK PLAN  
RESTRICTED STOCK UNIT AWARD**

**Terms and Conditions**

The Company wishes to grant to Employee, effective as of the date set forth on the Notice of Grant of Award, an award of restricted stock units of the Company's common stock, par value \$.01 per share (the "Common Stock"), on the terms and subject to the conditions set forth in the Notice of Grant of Award, these Terms and Conditions, and the Company's 2001 Incentive Stock Plan, as amended from time to time. As a condition to the grant of such Award, Employee accepts these Terms and Conditions.

1. Definitions. As used in these Terms and Conditions, the following terms have the meanings set forth below:

"Acquiring Person" means any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) who or which, together with all Affiliates and Associates of such person, is the "beneficial owner" (as defined in Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of the Company representing 35% or more of the combined voting power of the Company's then outstanding securities, but shall not include the Company, or any subsidiary of the Company.

"Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 promulgated under the Exchange Act.

"Award" has the meaning ascribed to such term in Section 2 hereof.

"Board" means the Board of Directors of the Company.

A "Change in Control" means:

(a) the public announcement (which, for purposes of this definition, shall include, without limitation, a report filed pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") that any person, entity or "group", within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act, other than the Company or any of its subsidiaries, has become the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 35% or more of the combined voting power of the Company's then outstanding voting securities in a transaction or series of transactions; or

(b) the "Continuing Directors" (as defined below) cease to constitute a majority of the Board; or

(c) the shareholders of the Company approve:

(i) any consolidation or merger of the Company in which the Company is not the continuing or surviving corporation; or

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(ii) any consolidation or merger of the Company following which either the Company or a corporation that, prior to the merger or consolidation, was a subsidiary of the Company, shall be the surviving entity and a majority of the then outstanding voting securities of the Company (the "Outstanding Company Voting Securities") is owned by a Person or Persons (as defined in Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended) who were not "beneficial owners" of a majority of the Outstanding Company Voting Securities immediately prior to such merger or consolidation;

other than, in the case of (i) or (ii) above, a merger of the Company in which shareholders of the Company immediately prior to the merger have the same proportionate ownership of stock of the surviving corporation immediately after the merger; or

(d) any sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all or substantially all of the assets of the Company; or

(e) any plan of liquidation or dissolution of the Company; or

(f) the majority of the Continuing Directors determine in their sole and absolute discretion that there has been a change in control of the Company.

"Code" means the Internal Revenue Code of 1986, as amended.

"Common Stock" has the meaning specified in the Recital to these Terms and Conditions.

"Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

"Continuing Director" means any person who is a member of the Board who, while such a person is a member of the Board, is not an Acquiring Person or an Affiliate or Associate of an Acquiring Person, or a representative of an Acquiring Person or of any such Affiliate or Associate, and who (i) was a member of the Board on the date of these Terms and Conditions or (B) subsequently becomes a member of the Board with the approval of at least one-half (1/2) of the directors then in office (but excluding for this purpose any such individual whose initial assumption of office occurs as a result of either an actual or threatened election contest or other actual or threatened solicitation of proxies or consents by or on behalf of a Person).

"Plan" means the Company's 2001 Incentive Stock Plan, as amended from time to time.

"Restricted Stock Units" means the right to receive Vested Shares upon their vesting in accordance with Section 3 below.

"Shares" means, collectively, the shares of Common Stock subject to the Award, whether or not such shares are Vested Shares.

“Vested Shares” means the Shares with respect to which the Restricted Stock Units have vested at any particular time.

2. Award. The Company, effective as of the date set forth on the Notice of Grant of Award, hereby grants to Employee Restricted Stock Units (the “Award”) representing the right to receive Vested Shares, subject to the terms and conditions set forth herein and in the Plan.

3. Vesting.

(a) Subject to the provisions of these Terms and Conditions, the Restricted Stock Units awarded to Employee shall vest and become the right to receive Vested Shares in accordance with the schedule indicated in the Notice of Grant of Award.

(b) Notwithstanding the vesting provisions contained in Section 3(a) above, but subject to the other terms and conditions set forth herein, if Employee has been continuously employed by the Company until the date of a Change in Control of the Company, all of the Restricted Stock Units shall immediately vest on the date of such Change in Control.

(c) In the event of the disability (within the meaning of Section 409A of the Code) or death of Employee, if Employee has been continuously employed by the Company until the date of such disability or death, Employee or his estate shall become immediately vested, as of the date of such disability or death, in all of the Restricted Stock Units subject to the Award.

(d) Except as provided in Section 3(c) and any effective employment agreements that Employee might have with the Company, if Employee ceases to be an employee for any reason prior to the vesting of the Restricted Stock Units pursuant to Sections 3(a) or 3(b) hereof, Employee’s rights to all of the Restricted Stock Units (and the Shares subject to the Award) not vested on the date that Employee ceases to be an employee shall be immediately and irrevocably forfeited and the Employee will retain no rights with respect to the forfeited units.

4. Additional Restriction on Transfer of Restricted Stock Units.

The Restricted Stock Units cannot be sold, assigned, transferred, gifted, pledged, hypothecated, or in any manner encumbered or disposed of at any time prior to delivery of the Shares underlying the Restricted Stock Units after the Restricted Stock Units have vested pursuant to Section 3 above.

5. Issuance and Custody of Certificate; Representations of Employee.

(a) Subject to the restrictions in this Section 5, upon vesting of the Restricted Stock Units and following payment of any applicable withholding taxes pursuant to Section 8 of these Terms and Conditions, the Company shall promptly cause to be issued and delivered to Employee a certificate or certificates evidencing such Vested Shares, free of any restrictive legends and registered in the name of Employee or in the name of Employee’s legal representatives, beneficiaries or heirs, as the case may be, and shall cause such certificate or certificates to be delivered to Employee or Employee’s legal representatives, beneficiaries or

heirs; provided, that such certificate or certificates shall be issued no later than two and one-half (2 ½) months following the end of the calendar year in which the vesting date occurs.

(b) The issuance of any Common Stock in accordance with this Award shall only be effective at such time that the sale or issuance of Common Stock pursuant to these Terms and Conditions will not violate any state or federal securities or other laws.

(c) At any time after the vesting of the Restricted Stock Units and prior to the issuance of the Vested Shares, if the issuance of the Vested Shares to the Employee is prohibited due to limitations under this Section 5, the Company shall use its reasonable best efforts to remove such limitations, unless such limitations relate solely to Employee's personal situation. If such limitations relate solely to Employee's personal situation, the Company will use its reasonable best efforts to cooperate with the Employee in resolving such limitation.

6. Rights as Shareholder. Prior to the Restricted Stock Units vesting and Employee receiving his shares of Common Stock underlying the Restricted Stock Units pursuant to Section 5 above, Employee shall not have ownership or rights of ownership of any Common Stock underlying the Restricted Stock Units awarded hereunder. Employee shall not be entitled to receive dividend equivalents on the Restricted Stock Units awarded.

7. Distributions and Adjustments. In accordance with Section 4(C) of the Plan, the Award shall be subject to adjustment in the event that any distribution, recapitalization, reorganization, merger or other event covered by Section 4(C) of the Plan shall occur.

8. Taxes. In order to provide the Company with the opportunity to claim the benefit of any income tax deduction which may be available to it in connection with this restricted stock unit award, and in order to comply with all applicable federal or state tax laws or regulations, the Company may take such action as it deems appropriate to insure that, if necessary, all applicable federal or state income and social security taxes are withheld or collected from Employee.

9. Employee's Employment. Nothing in these Terms and Conditions shall confer upon Employee any right to continue in the employ of the Company or any of its subsidiaries or interfere with the right of the Company or its subsidiaries, as the case may be, to terminate Employee's employment or to increase or decrease Employee's compensation at any time.

10. Notices. All notices, claims, certificates, requests, demands, and other communications hereunder shall be in writing and shall be deemed to have been duly given and delivered if personally delivered or if sent by nationally recognized overnight courier, by facsimile or by registered or certified mail, return receipt requested and postage prepaid, addressed as follows:

(a) If to the Company, to it at:

Enzon Pharmaceuticals, Inc.  
685 Route 202/206  
Bridgewater, New Jersey 08807  
Attn: Executive Vice President, Human Resources

(b) If to Employee, to him/her at such Employee's address as most recently supplied to the Company and set forth in the Company's records; or

(c) to such other address as the party to whom notice is to be given may have furnished to the other party in writing in accordance herewith.

Any such notice or communication shall be deemed to have been received (i) in the case of personal delivery, on the date of such delivery (or if such date is not a business day, on the next business day), (ii) in the case of nationally-recognized overnight courier, on the next business day after the date sent, (iii) in the case of facsimile transmission, when received (or if not sent on a business day, on the next business day after the date sent), and (iv) in the case of mailing, on the third business day following the date on which the piece of mail containing such communication is posted.

11. Waiver of Breach. The waiver by either party of a breach of any provision of these Terms and Conditions must be in writing and shall not operate or be construed as a waiver of any other or subsequent breach.

12. Undertaking. Both parties hereby agree to take whatever additional actions and execute whatever additional documents either party may in their reasonable judgment deem necessary or advisable in order to carry out or effect one or more of the obligations or restrictions imposed on the other party under the provisions of these Terms and Conditions.

13. Plan Provisions Control. The Award is made subject to the terms and provisions of the Plan. In the event that any provision of the Agreement conflicts with or is inconsistent in any respect with the terms of the Plan, the terms of the Plan shall control.

14. Governing Law. These Terms and Conditions shall be governed by, and construed in accordance with, the laws of the State of Delaware (without giving effect to principles of conflicts of laws).

15. Section 409A. To the extent the Award is or becomes subject to Section 409A of the Code, the Notice of Grant of Award and these Terms and Conditions shall be construed and interpreted in accordance with such Section 409A so as to avoid the assessment of additional tax and/or penalties thereunder.

16. Entire Agreement. These Terms and Conditions (and the other writings incorporated by reference herein, including the Plan) constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior or contemporaneous written or oral negotiations, commitments, representations, and agreements with respect thereto.

**ENZON PHARMACEUTICALS, INC.  
NOTICE OF GRANT OF AWARD  
RESTRICTED STOCK UNIT AWARD**

**Grant Date: xx/xx/xx  
Certificate No. xxxxxxxx**

<b>Summary Grant Information</b>	
EMPLOYEE:	
NUMBER OF UNITS:	
GRANT DATE FAIR MARKET VALUE OF SHARES	\$xx.xx per share
PLAN:	2001 Incentive Stock Plan (the "Plan")

<b>Vesting Information</b>		
Date	Percentage of Restricted Stock Unit Award that Vests	Number of Restricted Stock Units that Vest

In accordance with the terms and conditions of the Plan and as a condition to the Award set forth above, the Employee agrees to the provisions set forth in the Terms and Conditions attached hereto.

ENZON PHARMACEUTICALS, INC.

By: \_\_\_\_\_  
Paul Davit  
Executive Vice President, Human Resources

**ENZON PHARMACEUTICALS, INC.**  
**2001 INCENTIVE STOCK PLAN**  
**RESTRICTED STOCK AWARD**

**Terms and Conditions**

The Company wishes to grant to Employee, effective as of the date set forth on the Notice of Grant of Award, an award of restricted shares of the Company's common stock, par value \$.01 per share (the "Common Stock"), on the terms and subject to the conditions set forth in the Notice of Grant of Award, these Terms and Conditions, and the Company's 2001 Incentive Stock Plan, as amended from time to time. As a condition to the grant of such Award, Employee accepts these Terms and Conditions.

1. Definitions. As used in these Terms and Conditions, the following terms have the meanings set forth below:

"Acquiring Person" means any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) who or which, together with all Affiliates and Associates of such person, is the "beneficial owner" (as defined in Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of the Company representing 35% or more of the combined voting power of the Company's then outstanding securities, but shall not include the Company, or any subsidiary of the Company.

"Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 promulgated under the Exchange Act.

"Award" has the meaning ascribed to such term in Section 2 hereof.

"Board" means the Board of Directors of the Company.

A "Change in Control" means:

(a) the public announcement (which, for purposes of this definition, shall include, without limitation, a report filed pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") that any person, entity or "group", within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act, other than the Company or any of its subsidiaries, has become the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 35% or more of the combined voting power of the Company's then outstanding voting securities in a transaction or series of transactions; or

(b) the "Continuing Directors" (as defined below) cease to constitute a majority of the Board; or

(c) the shareholders of the Company approve:

(i) any consolidation or merger of the Company in which the Company is not the continuing or surviving corporation; or

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(ii) any consolidation or merger of the Company following which either the Company or a corporation that, prior to the merger or consolidation, was a subsidiary of the Company, shall be the surviving entity and a majority of the then outstanding voting securities of the Company (the "Outstanding Company Voting Securities") is owned by a Person or Persons (as defined in Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended) who were not "beneficial owners" of a majority of the Outstanding Company Voting Securities immediately prior to such merger or consolidation;

other than, in the case of (i) or (ii) above, a merger of the Company in which shareholders of the Company immediately prior to the merger have the same proportionate ownership of stock of the surviving corporation immediately after the merger; or

(d) any sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all or substantially all of the assets of the Company; or

(e) any plan of liquidation or dissolution of the Company; or

(f) the majority of the Continuing Directors determine in their sole and absolute discretion that there has been a change in control of the Company.

"Code" means the Internal Revenue Code of 1986, as amended.

"Common Stock" has the meaning specified in the Recital to these Terms and Conditions.

"Continuing Director" means any person who is a member of the Board who, while such a person is a member of the Board, is not an Acquiring Person or an Affiliate or Associate of an Acquiring Person, or a representative of an Acquiring Person or of any such Affiliate or Associate, and who (i) was a member of the Board on the date of these Terms and Conditions or (ii) subsequently becomes a member of the Board with the approval of at least one-half (1/2) of the directors then in office (but excluding for this purpose any such individual whose initial assumption of office occurs as a result of either an actual or threatened election contest or other actual or threatened solicitation of proxies or consents by or on behalf of a Person).

"Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

"Plan" means the Company's 2001 Incentive Stock Plan, as amended from time to time.

"Shares" means, collectively, the shares of Common Stock constituting the Award, whether or not such shares are vested.

2. Award. The Company, effective as of the date set forth on the Notice of Grant of Award, hereby grants to Employee an award of the number of restricted shares of Common

Stock indicated in the Notice of Grant of Award delivered to Employee (the "Award"), subject to the terms and conditions set forth herein and in the Plan.

3. Vesting.

(a) Subject to the provisions of these Terms and Conditions, the Shares shall vest in accordance with the schedule indicated in the Notice of Grant of Award.

(b) Notwithstanding the vesting provisions contained in Section 3(a) above, but subject to the other terms and conditions set forth herein, if Employee has been continuously employed by the Company until the date of a Change in Control of the Company, all of the Shares shall immediately vest on the date of such Change in Control.

(c) In the event of the disability (within the meaning of Section 22(e)(3) of the Code) or death of Employee, if Employee has been continuously employed by the Company until the date of such disability or death, Employee or his estate shall become immediately vested, as of the date of such disability or death, in all of the Shares.

(d) Except as provided in Section 3(c) and any effective employment agreements that Employee might have with the Company, if Employee ceases to be an employee for any reason prior to the vesting of the Shares pursuant to Sections 3(a) or 3(b) hereof, Employee's rights to all of the Shares not vested on the date that Employee ceases to be an employee shall be immediately and irrevocably forfeited and the Employee will retain no rights with respect to the forfeited units.

4. Additional Restriction on Transfer of Restricted Stock Units.

The Shares cannot be sold, assigned, transferred, gifted, pledged, hypothecated, or in any manner encumbered or disposed of until such Shares have become vested.

5. Rights as Shareholder. Employee shall be entitled at all times to all of the rights of a stockholder with respect to the Shares, including without limitation the right to vote and tender such Shares and to receive dividends and other distributions as provided in and subject to the provisions of Section 6.

6. Distributions and Adjustments.

(a) In accordance with Section 4(C) of the Plan, the Award shall be subject to adjustment in the event that any distribution, recapitalization, reorganization, merger or other event covered by Section 4(C) of the Plan shall occur. If all or any portion of the Shares vest subsequent to any such change in the number or character of the shares of Common Stock, Employee shall then receive upon such vesting the number and type of securities or other consideration which Employee would have received if the Shares had vested prior to the event changing the number or character of outstanding shares of Common Stock.

(b) Any additional shares of Common Stock, any other securities of the Company and any other property (except for cash dividends) distributed with respect to the Shares prior to the date the Shares vest shall be subject to the same restrictions, terms and

conditions as the Shares. Any cash dividends payable with respect to the Shares shall be distributed to Employee at the same time cash dividends are distributed to stockholders of the Company generally.

7. Taxes.

(a) In order to provide the Company with the opportunity to claim the benefit of any income tax deduction which may be available to it in connection with the Award, and in order to comply with all applicable federal or state tax laws or regulations, the Company may take such action as it deems appropriate to insure that, if necessary, all applicable federal or state income and social security taxes are withheld or collected from Employee.

(b) The issuance of the Shares to Employee pursuant to these Terms and Conditions involves complex and substantial tax considerations, including, without limitation, consideration of the advisability of Employee making an election under Section 83(b) of the Internal Revenue Code. The Employee is urged to consult his own tax advisor with respect to the transactions described in these Terms and Conditions. The Company makes no warranties or representations whatsoever to the Employee regarding the tax consequences of the grant to the Employee of the Shares or these Terms and Conditions. Employee acknowledges that the making of any Section 83(b) election shall be his personal responsibility.

(c) Employee may elect to satisfy federal and state income tax withholding obligations arising from the receipt of, or the lapse of restrictions relating to, the Shares by (i) delivering cash, check (bank check, certified check or personal check) or money order payable to the order of the Company, (ii) having the Company withhold a portion of the Shares otherwise to be delivered having a fair market value based on the last reported sale price of a share of Common Stock on the Nasdaq Stock Market (or if the Shares no longer trade on the Nasdaq Stock Market, the closing or last reported price on the principal exchange or system on which they trade) on the date of vesting (the "Fair Market Value") equal to the amount of such taxes, or (iii) delivering to the Company Common Stock having a Fair Market Value equal to the amount of such taxes. The Company will not deliver any fractional Share but will pay, in lieu thereof, the Fair Market Value of such fractional Share. The Employee's election must be made on or before the date that the amount of tax to be withheld is determined. Otherwise, the Company shall be entitled to withhold taxes due in such manner as the Company determines in its discretion.

8. Employee's Employment. Nothing in these Terms and Conditions shall confer upon Employee any right to continue in the employ of the Company or any of its subsidiaries or interfere with the right of the Company or its subsidiaries, as the case may be, to terminate Employee's employment or to increase or decrease Employee's compensation at any time.

9. Notices. All notices, claims, certificates, requests, demands, and other communications hereunder shall be in writing and shall be deemed to have been duly given and delivered if personally delivered or if sent by nationally recognized overnight courier, by facsimile or by registered or certified mail, return receipt requested and postage prepaid, addressed as follows:

(a) If to the Company, to it at:

Enzon Pharmaceuticals, Inc.  
685 Route 202/206  
Bridgewater, New Jersey 08807  
Attn: Executive Vice President, Human Resources

(b) If to Employee, to him/her at such Employee's address as most recently supplied to the Company and set forth in the Company's records; or

(c) to such other address as the party to whom notice is to be given may have furnished to the other party in writing in accordance herewith.

Any such notice or communication shall be deemed to have been received (i) in the case of personal delivery, on the date of such delivery (or if such date is not a business day, on the next business day), (ii) in the case of nationally-recognized overnight courier, on the next business day after the date sent, (iii) in the case of facsimile transmission, when received (or if not sent on a business day, on the next business day after the date sent), and (iv) in the case of mailing, on the third business day following the date on which the piece of mail containing such communication is posted.

10. Waiver of Breach. The waiver by either party of a breach of any provision of these Terms and Conditions must be in writing and shall not operate or be construed as a waiver of any other or subsequent breach.

11. Undertaking. Both parties hereby agree to take whatever additional actions and execute whatever additional documents either party may in their reasonable judgment deem necessary or advisable in order to carry out or effect one or more of the obligations or restrictions imposed on the other party under the provisions of these Terms and Conditions.

12. Plan Provisions Control. The Award is made subject to the terms and provisions of the Plan. In the event that any provision of the Agreement conflicts with or is inconsistent in any respect with the terms of the Plan, the terms of the Plan shall control.

13. Governing Law. These Terms and Conditions shall be governed by, and construed in accordance with, the laws of the State of Delaware (without giving effect to principles of conflicts of laws).

14. Entire Agreement. These Terms and Conditions (and the other writings incorporated by reference herein, including the Plan) constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior or contemporaneous written or oral negotiations, commitments, representations, and agreements with respect thereto.

**ENZON PHARMACEUTICALS, INC.  
NOTICE OF GRANT OF AWARD**

**RESTRICTED STOCK AWARD**

**Grant Date: xx/xx/xx**

**Certificate No. xxxxxxxx**

<b>Summary Grant Information</b>	
EMPLOYEE:	
NUMBER OF SHARES:	
GRANT DATE FAIR MARKET VALUE	\$xx.xx per share
PLAN:	2001 Incentive Stock Plan (the "Plan")

<b>Vesting Information</b>		
Date	Percentage of Restricted Stock Award that Vests	Number of Shares of Restricted Stock that Vest

In accordance with the terms and conditions of the Plan and as a condition to the Award set forth above, the Employee agrees to the provisions set forth in the Terms and Conditions attached hereto.

ENZON PHARMACEUTICALS, INC.

By: \_\_\_\_\_  
Paul Davit  
Executive Vice President, Human Resources

**ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES**  
**Ratio of Earnings to Fixed Charges**  
(in thousands)

	Year Ended December 31,			Six Months Ended December 31,	Year ended June 30,	
	2008	2007	2006	2005	2005	2004
Determination of earnings:						
(Loss) income from continuing operations before income taxes	\$ (2,411)	\$ 84,986	\$ 22,067	\$ (302,284)	\$ (11,662)	\$ 7,385
Add:						
Fixed Charges	13,450	18,131	22,590	10,103	20,287	20,275
Earnings, as adjusted	<u>\$ 11,039</u>	<u>\$ 103,117</u>	<u>\$ 44,657</u>	<u>\$ (292,181)</u>	<u>\$ 8,625</u>	<u>\$ 27,660</u>
Fixed charges:						
Interest expense (gross) <sup>(1)</sup>	\$ 12,681	\$ 17,380	\$ 22,055	\$ 9,841	\$ 19,829	\$ 19,829
Portion of rent representative of the interest factor <sup>(2)</sup>	769	751	535	262	458	446
Fixed charges	<u>\$ 13,450</u>	<u>\$ 18,131</u>	<u>\$ 22,590</u>	<u>\$ 10,103</u>	<u>\$ 20,287</u>	<u>\$ 20,275</u>
Deficiency of earnings available to cover fixed charges	<u>\$ (2,411)</u>	<u>N/A</u>	<u>N/A</u>	<u>\$ (302,284)</u>	<u>\$ (11,662)</u>	<u>N/A</u>
Ratio of earnings to fixed charges	<u>N/A</u>	<u>6:1</u>	<u>2:1</u>	<u>N/A</u>	<u>N/A</u>	<u>1:1</u>

<sup>(1)</sup> Interest expense includes amortization of deferred offering costs of \$1.1 million, \$1.6 million, \$1.8 million and \$976,000 for the years ended December 31, 2008, 2007 and 2006, and the six months ended December 31, 2005, respectively, and \$1.8 million for each of the two fiscal years ended June 30, 2005.

<sup>(2)</sup> Approximately 33 percent of annual rent expense is included in the computation. The Company believes this is a reasonable estimate of the interest factor in its leases, which are not material. The underlying rent amounts were \$2.3 million, \$2.3 million, \$1.6 million, \$795,000, \$1.4 million and \$1.4 million for the years ended December 31, 2008, 2007 and 2006, the six months ended December 31, 2005 and the fiscal years ended June 30, 2005 and 2004, respectively.

**ENZON PHARMACEUTICALS, INC.**  
**Subsidiaries of Registrant**

<b>Subsidiary</b>	<b>State or Other Jurisdiction of Incorporation</b>
SCA Ventures, Inc.	Delaware
Enzon Pharmaceuticals, Ltd.	Canada
Evivrus, Inc.	Delaware
Enzon (UK) Limited	United Kingdom

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**Consent of Independent Registered Public Accounting Firm**

The Board of Directors  
Enzon Pharmaceuticals, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-101898, 333-64110, 333-18051, 333-121468, 333-140282, 333-134453, and 333-132467) on Form S-8 and in the registration statement (No. 333-137723) on Form S-3 of Enzon Pharmaceuticals, Inc. of our reports dated March 6, 2009, with respect to the consolidated balance sheets of Enzon Pharmaceuticals, Inc. and subsidiaries as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the years in the three-year period ended December 31, 2008, the related financial statement schedule, and the effectiveness of internal control over financial reporting as of December 31, 2008, which reports appear in the December 31, 2008 Annual Report on Form 10-K of Enzon Pharmaceuticals, Inc.

/s/ KPMG LLP

Short Hills, New Jersey  
March 6, 2009

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**CERTIFICATION PURSUANT TO  
SECTION 302 OF  
THE SARBANES-OXLEY ACT OF 2002**

I, Jeffrey H. Buchalter, certify that:

1. I have reviewed this Report on Form 10-K of Enzon Pharmaceuticals, Inc. (Enzon);
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 internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying 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.

March 6, 2009

/s/ Jeffrey H. Buchalter

Jeffrey H. Buchalter  
Chairman, President and Chief Executive Officer  
(Principal Executive Officer)

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**CERTIFICATION PURSUANT TO  
SECTION 302 OF  
THE SARBANES-OXLEY ACT OF 2002**

I, Craig A. Tooman, certify that:

1. I have reviewed this Report on Form 10-K of Enzon Pharmaceuticals, Inc. (Enzon);
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 internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying 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.

March 6, 2009

/s/ Craig A. Tooman

Craig A. Tooman  
Executive Vice President, Finance and  
Chief Financial Officer  
(Principal Financial Officer)

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**CERTIFICATION PURSUANT  
TO 18 U.S.C. §1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Enzon Pharmaceuticals, Inc. (the Company) on Form 10-K for the year ended December 31, 2008 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Jeffrey H. Buchalter, Chairman, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 6, 2009

/s/ Jeffrey H. Buchalter  
Jeffrey H. Buchalter  
Chairman, President and Chief Executive Officer  
(Principal Executive Officer)

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Enzon Pharmaceuticals, Inc. and will be furnished to the Securities Exchange Commission or its staff upon request.

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**CERTIFICATION PURSUANT TO  
18 U.S.C. §1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Enzon Pharmaceuticals, Inc. (the Company) on Form 10-K for the year ended December 31, 2008 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Craig A. Tooman, Executive Vice President, Finance and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 6, 2009

/s/ Craig A. Tooman  
Craig A. Tooman  
Executive Vice President,  
Finance and Chief Financial Officer  
(Principal Financial Officer)

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Enzon Pharmaceuticals, Inc. and will be furnished to the Securities Exchange Commission or its staff upon request.

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