STRENGTH +INNOVATION

ENZON PHARMACEUTICALS 2008 ANNUAL REPORT

ENZON
PHARMACEUTICALS

ABOUT ENZON PHARMACEUTICALS

Enzon Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to developing, manufacturing and commercializing important medicines for patients with cancer and other life-threatening conditions. The Company has a portfolio of four marketed products, Oncaspar®, DepoCyt®, Abelcet® and Adagen®. Enzon's drug development programs utilize several cutting-edge approaches, including its industry-leading PEGylation technology platform and the Locked Nucleic Acid (LNA) technology. Enzon's PEGylation technology was used to develop two of its products, Oncaspar and Adagen, and has created a royalty revenue stream from licensing partnerships for other products developed using the technology. Enzon also engages in contract manufacturing for several pharmaceutical companies to broaden its revenue base.

Strength and innovation. We believe these are the two key characteristics that best describe Enzon's position in the biopharmaceutical marketplace. The Company is now a technology-based, product-driven, oncology-focused organization.

Jeffrey H. Buchalter
Chairman, President
and Chief Executive Officer

DEAR SHAREHOLDERS

Strength and innovation. We believe these are the two key characteristics that best describe Enzon's position in the biopharmaceutical marketplace. Over the last several years, we have successfully transformed the Company into a technology-based, product-driven, oncology-focused organization. In 2008, we delivered solid results despite a very challenging economic environment.

Our progress has been steady and the fundamentals of our business are strong. We have built an innovative and novel pipeline, improved the balance sheet and delivered operating efficiencies. As part of our strategic plan, we continue to explore possibilities that can create additional value for our shareholders, including partnership opportunities, improving our capital structure and reviewing licensing prospects.

We are proud to have delivered strong results in 2008. Enzon's commitment to build a novel and innovative oncology business continues to become a reality precisely because of our Company's strength and innovation.

FISCAL STRENGTH

Enzon's fiscal health is an important factor for continued success in today's marketplace. In 2008, we improved our balance sheet by making smart decisions. We eliminated short-term debt. With a good cash position, we did not have a need to access restricted capital markets. Our products continued to deliver solid results, allowing us to invest in next-generation products and promising R&D programs. Enzon's financial strength allows us to be innovative, which is the other core characteristic vital to being successful in this industry.

INNOVATION

The progress made in 2008 to advance Enzon's novel oncology pipeline is exciting and sets the stage for promising developments. The PEG-SN38 program has shown good results from our two Phase I programs. We will be advancing this agent in the clinic to explore its role in a broad range of cancers, including colon and breast.

Our most advanced Locked Nucleic Acid (LNA) compound, the HIF-1 alpha antagonist, is another area of great interest as we work to develop innovative treatments for adults suffering from a variety of cancers. We have been able to treat over 50 patients in two Phase I dose escalation studies. Early results have been encouraging and we plan to advance this program in 2009.

Survivin is Enzon's next LNA target moving forward in development. The Company's Investigational New Drug (IND) application was filed with the U.S. Food and Drug Administration in December 2008 and I am pleased to report that a Phase I study for our Survivin antagonist is already open for patient enrollment. We have also completed enrollment in the first cohort and observed an excellent safety profile so far.

ORGANIC GROWTH BASED ON SOLID RESULTS

Enzon's currently marketed brands, which include Oncaspar, DepoCyt, Abelcet and Adagen continue to make a difference in the lives of patients with life threatening illnesses. Oncaspar continues to be the accepted standard of care for patients with acute lymphoblastic leukemia (ALL) in the pediatric and adolescent patient population, and has been incorporated in several therapeutic regimens for adult patients with ALL. Adagen continues to be the standard therapy for SCID patients with adenosine deaminase (ADA) deficiency.

The success we have seen with Oncaspar and Adagen is the rationale for continuing to invest in their next-generation products with improved pharmaceutical properties. These are important investments that will secure long-term drug supply and will allow us to make these life-saving drugs available to those who rely on them. They will also provide broader commercial opportunities outside of the United States and are expected to result in improved margins, as these new generation compounds will be manufactured with state-of-the-art methods.

REALIZING IMPROVED OPERATING EFFICIENCIES

In 2007, we took several steps to improve the Company's operating efficiencies throughout the organization. I believe these actions created a leaner, more effective organization in 2008. The consolidation of our sales forces into one team resulted in solid revenues at greater margins. Our contract manufacturing business grew. We expect to realize continued efficiency from the consolidation of our two manufacturing facilities into the Indianapolis, Indiana facility.

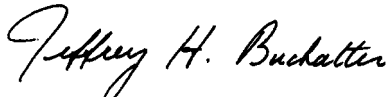
BEYOND 2008

We are proud of our accomplishments in 2008 and I believe we continue to deliver value to our shareholders with solid and stable results. In today's uncertain financial market, we believe Enzon's strength and innovation will continue to propel us forward. We want to further improve our capital structure and continue to see an improvement in efficiencies, such as the consolidation of our manufacturing facilities and sales force realignment.

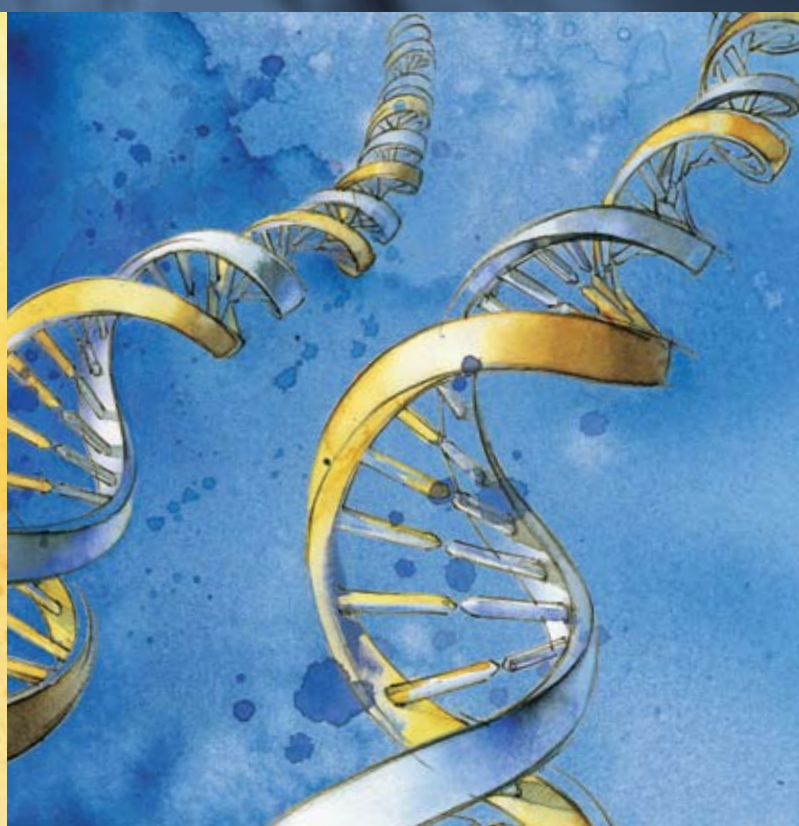
The progress made in 2008 to advance Enzon's novel oncology pipeline is exciting and sets the stage for promising developments

Despite the very uncertain macroeconomic environment, we at Enzon have focused on the fundamentals of the business and created a stronger company. In addition to expecting continued stability from our marketed products, our innovative pipeline will begin to gain visibility. I am confident in our future and believe this next year will be very exciting.

Sincerely,



Jeffrey H. Buchalter
Chairman, President
and Chief Executive Officer



PEGYLATION

PEGylation provides many advantages, including improving solubility, optimizing pharmacokinetics, improving tumor delivery, and enhancing the therapeutic index.

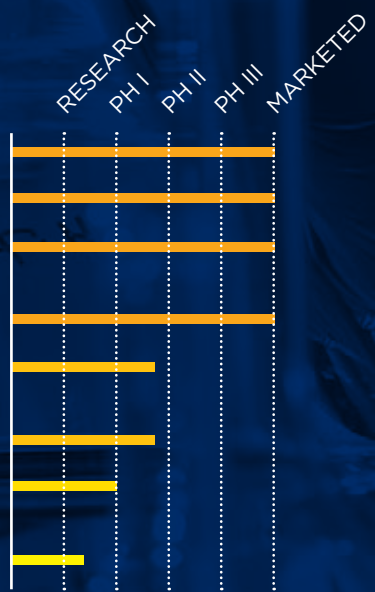
LNA PROCESS

Enzon is advancing compounds utilizing the LNA Technology Platform into clinical trials (HIF-1 alpha antagonist and Survivin antagonist).

+ Enzon's research and development program continued to remain focused in 2008 as we worked to build an innovative and novel oncology pipeline.

ENZON PRODUCT PORTFOLIO + PIPELINE

PRODUCT	PLATFORM/TECHNOLOGY	INDICATION
Oncaspar®	PEGylated Enzyme	Acute Lymphoblastic Leukemia
DepoCyt®	Sustained Release Cytotoxic	Lymphomatous Meningitis
Abelcet®	Lipid Complex Formulation	Invasive Fungal Infections
Adagen®	PEGylated Enzyme	Severe Combined Immunodeficiency Disease (SCID)
HIF-1α Antagonist	RNA Antagonist	Oncology
PEG-SN38	PEGylated Cytotoxic	Oncology
Survivin Antagonist	RNA Antagonist	Oncology
LNA Targets	RNA Antagonist	Oncology



Early, promising results with PEG-SN38 are leading to advances in the clinic.

Under the leadership of the Enzon team, we have developed a differentiated portfolio that may one day lead to the availability of novel agents that will make a difference in the lives of people living with cancer.

PEG-SN38

Enzon is very excited about the PEG-SN38 program which has shown early promise and continues to advance in the clinic. PEG-SN38 is a PEGylated form of SN38, the active metabolite of Camptosar, a chemotherapeutic agent which is commonly used to treat colorectal cancer. The PEG-SN38 program is a key example where Enzon has used its proprietary Pegylation technology to develop an exciting and novel anticancer agent. Pegylation of SN38 not only dramatically increases the solubility of SN38 (thereby allowing administration of this agent previously not possible), but also increases exposure and half-life of SN38. As a result, PEG-SN38 inhibits topoisomerase I (the previously known target) and appears to have a novel mechanism of action. Moreover, in pre-clinical studies, PEG-SN38 is highly efficacious in blocking the growth of tumors resistant and refractory to Camptosar. It also markedly and consistently outperforms Camptosar in animal models of breast cancer, lymphoma, and neuroblastoma. Based on the robust and very encouraging preclinical data, Enzon opened two Phase I trials exploring different PEG-SN38 dosing regimens.

A total of 67 patients were treated in two Phase I studies. A significant number of patients with advanced cancer experienced clinical benefit from PEG-SN38 treatment in both studies. It is expected that PEG-SN38 will move forward in the clinic with Phase II trials in colorectal and metastatic breast cancer in 2009.

LOCKED NUCLEIC ACID TECHNOLOGY

Inhibition of the proteins that specifically stimulate cancer growth without harming normal cells represents the next phase of modern cancer therapeutics. While a few small molecules and antibodies have achieved this endpoint in patients, it is now clear that many of the

molecular targets in cancer will not be easily amenable to such conventional approaches. Enzon has recognized this opportunity by developing RNA antagonists to treat cancer. RNA-targeting agents destroy the messenger RNA (mRNA) encoding key cancer proteins, and thereby are expected to inhibit the growth of only cancer cells.

To translate this novel approach to the clinic, Enzon is using the latest, third generation antisense technology known as Locked Nucleic Acid® (LNA) Technology. LNA–based mRNA antogonists improve the stability, affinity, and potency of previous versions of mRNA targeting agents. Enzon has licensed LNA technology and is applying this to eight key cancer targets. All of these targets, have been difficult to inhibit with conventional therapies. Two compounds have already advanced into clinical trials.

The first LNA compound, the HIF-1 alpha (hypoxia-inducible factor 1 alpha) antagonist, has been studied in two Phase I trials. HIF-1 alpha is a well-validated target in many cancer types, including a broad spectrum of solid tumors. Between the two studies, 53 patients have been treated, including patients with renal, liver and colorectal cancers. Early results are particularly encouraging because we have seen a direct effect on tumor size in a number of patients with little or no side effects. We expect to advance this program into Phase II in the upcoming year.

Enzon's second LNA target in development is Survivin. Survivin is dramatically over-expressed in many cancers and its expression correlates with poor prognosis, increased cancer recurrence, and resistance to therapy. The first Phase I study for our Survivin antagonist was started in early 2009. We have successfully completed enrollment in the first cohort and have observed an excellent safety profile.

CUSTOMIZED LINKER TECHNOLOGY™

Enzon continues to advance its Customized Linker Technology™ platform. Using the proprietary PEG-Linker Technology platform, we are addressing the great need for improved drug delivery systems, since 75 percent of novel targeted compounds have solubility or formulation problems. The Company is leveraging its strong knowledge base, expanding IP position and application to several cancer therapeutics to maximize the potential of this technology. Customized

Customized pegylation linkers address the critical need for improved drug delivery systems.

Linkers offer several key advantages—they can significantly improve the pharmaceutical properties of small molecules and protein therapeutics, and they also provide an opportunity to overcome delivery challenges.

PRODUCT SEGMENT

Enzon's oncology products and Adagen continue to be a critical component of our business, and especially for the patients in need of such treatments. Oncaspar, Depocyt, Abelcet and Adagen produced stable revenues in 2008 and continue to be life-saving treatments in their respective therapeutic arenas.

Enzon's products continue to deliver life-saving treatment to those patients who depend on them.

ONCASPAR

Oncaspar remains the preferred treatment option for children with Acute Lymphoblastic Leukemia (ALL). Oncaspar is a PEG-enhanced version of a naturally occurring enzyme called L-asparaginase. L-asparaginase is an enzyme that depletes the amino acid asparagines, which leukemic cells require to continue their rapid, malignant growth.

The product has seen double-digit growth since 2005 and we are beginning to see additional adoption in the adult and young adult settings. The drug continues to be utilized in the clinic because it offers significant advantages for patients, including fewer injections and few allergic reactions. Oncaspar's advantages over L-asparaginase continue to be valued by clinicians and patients.

Enzon is currently developing the next generation of Oncaspar to maximize its pharmaceutical properties for adults and children.

DEPOCYT

DepoCyt is a sustained release formulation of ara-C and is used as an injectable chemotherapeutic agent to treat patients with lymphomatous meningitis, a serious and debilitating complication of lymphoma that occurs in the central nervous system with the formation of secondary tumors within the thin membranes surrounding the brain, spinal cord or central nervous system. Lymphomatous meningitis only affects a small number of patients but is a critical condition.

Unlike standard therapy that is administered twice weekly, DepoCyt offers the advantage of being administered every two weeks.

Enzon plans to continue to generate additional data and raise awareness of this condition to promote this product's use.

ABELCET

Abelcet is a broad lipid-based IV antifungal treatment used primarily in the hospital setting. Patients with compromised immune systems, such as those undergoing chemotherapy or organ or bone marrow transplants, are highly susceptible to invasive fungal infections. Abelcet's attributes include broad fungicidal activity with proven efficacy. In 2008, Enzon began to see early signs of revenue stabilization in this very competitive marketplace.

ADAGEN

Adagen is Enzon's first FDA-approved product. It is a PEG technology enzyme replacement therapy used to treat children with Severe Combined Immunodeficiency Disease (SCID), also known as "Bubble Boy Disease." SCID is caused by the chronic deficiency of the adenosine deaminase (ADA) enzyme, and children born with this condition are susceptible to a wide range of infectious diseases. Enzon is continuing to educate on the importance of identifying patients at earlier stages in their disease. We are also currently developing a next-generation product with an improved manufacturing process and better pharmaceutical properties.

ROYALTIES

In addition to the Company's marketed products, Enzon earns royalties when its proprietary PEGylation technology is utilized by other companies. Currently, this includes royalties from four marketed products, namely PEG-INTRON, Pegasys, Macugen and CIMZIA.

PEG-INTRON, marketed by Schering-Plough for patients with hepatitis C, continues to comprise the majority of the Company's royalty revenue. This product continues to show growth.

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.

2008 REVENUE
in Millions

- Products
- Contract Manufacturing
- Royalty Segment

Enzon remains focused on strengthening the Company by improving the operating efficiencies and capital structure.

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.

OPERATING EFFICIENCIES

The Company has started to see improvements in operating costs as a result of its recent reorganization to improve operating efficiencies. The consolidation of our manufacturing operations in Indianapolis, Indiana was the first major step in this process and was completed in 2008. We have already begun to see the benefit of this action in cost of goods sold, and we expect to see continued efficiency from this consolidation moving forward.

Operating efficiency has also been achieved within our sales force. In 2007 we made the change to consolidate our sales force into one team to enhance the Company's promotional efforts. Selling costs were down in 2008 as a result of this strategic imperative and we will continue to make selective investments in the selling and marketing initiatives for our products.

We continue to focus on making new investments to improve current manufacturing processes of our products. Enzon also continues to provide services for customers who require injectable products. We will continue to look for new opportunities to utilize more of our manufacturing capacity.

We continue to improve our capital structure. During 2008, we improved our balance sheet by repurchasing and repaying $76.9 million of our outstanding convertible debt. We repurchased or repaid $72.4 million of our 4.5 percent convertible notes due in July 2008 and repurchased $4.5 million of our 4 percent notes due in June 2013.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

☑ **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

ENZON PHARMACEUTICALS INC

(Exact name of registrant as specified in its charter)

Delaware	**22-2372868**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
685 Route 202/206, Bridgewater, New Jersey	**08807**
(Address of principal executive offices)	*(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; Preferred Stock Purchase Rights	NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the 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. ☐

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

TABLE OF CONTENTS

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 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, through the SEC's website by clicking the SEC Filings link from the Investors' Info page on our website at www.enzon.com or directly from the SEC's website at 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) *COPILOT 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 colchincine 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 Hakko 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,
- 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 alfa 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 of 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., 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.

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 Abelcet, 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 out 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 of 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 biologicals. 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:

Location	Principal Operations	Approx. Square Footage	Approx. Annual Rent	Lease Expiration
20 Kingsbridge Road Piscataway, NJ..	Research & Development	56,000	$ 640,000[1]	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[2]	January 31, 2018

[1] Under the terms of the lease, annual rent increases over the remaining term of the lease from $640,000 to $773,000.

[2] 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***

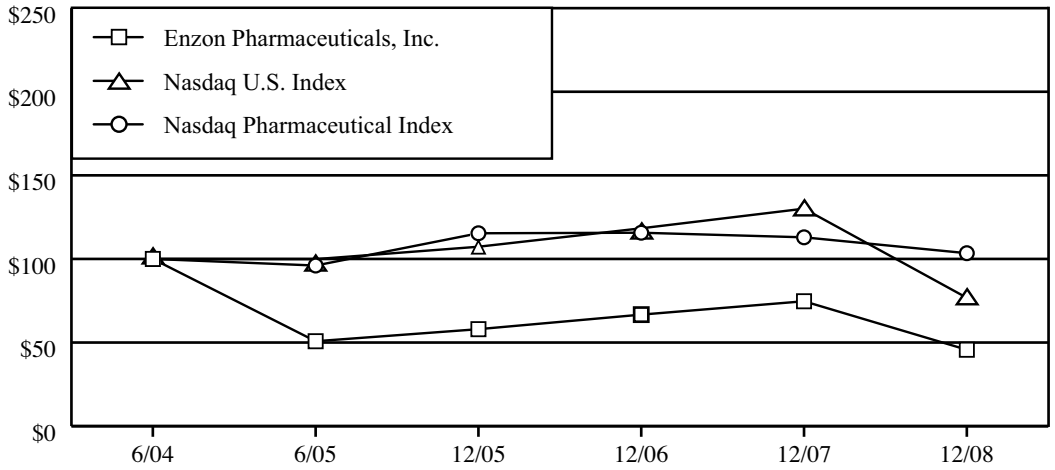
Market Information

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
Year Ended December 31, 2008		
First Quarter	$ 9.65	$8.00
Second Quarter	9.85	7.00
Third Quarter	9.48	6.92
Fourth Quarter	7.53	2.95
Year Ended December 31, 2007		
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

	Years Ending				
Company/Index	**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

		Years Ending				
Company/Index	**Base Period 6/04**	**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 December 31,	Year Ended June 30,	
	2008	2007	2006	2005[1] [2]	2005	2004
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[3]	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[4]	7,741[4]	—	—	2,053	—
Write-down of goodwill and intangibles	—	—	—	284,101[5]	—	—
Gain on sale of royalty interest	—	(88,666)[6]	—	—	—	—
Other operating expenses[3]	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	$ (2,715)	$ 83,053	$ 21,309	$(291,337)	$ (89,606)	$ 4,208
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
Consolidated Balance Sheet Data:						
Current assets	$178,142	$281,177	$212,311	$207,215	$213,882	$179,291
Current liabilities[7]	36,094	105,482	59,885	31,146	37,854	31,664
Total assets	349,253	420,357	403,830	341,345[5]	650,861	722,410
Long-term debt[7]	267,550	275,000	397,642	394,000	399,000	400,000
Total stockholders' equity (deficit)	41,661	36,573	(56,441)	(83,970)[5]	203,502	289,091

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

(2) 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.

(3) 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.

(4) 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.

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

(6) 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.

(7) 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

	Year Ended		
	December 2008	December 2007	December 2006
Products segment profit	$ 20.1	$ 8.0	$ 20.5
Royalties segment profit	59.5	156.0[1]	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	$ (2.4)	$ 85.0	$ 22.1

[1] 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):

	Year Ended				
	December 2008	% Change	December 2007	% Change	December 2006
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	$ 20.1	151	$ 8.0	(61)	$ 20.5

n.m. — not meaningful

Revenues

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

	Year Ended				
Product	December 2008	% Change	December 2007	% Change	December 2006
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	$113.8	13	$100.7	—	$101.0

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):

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

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):

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

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

	Year Ended				
	December 2008	% Change	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	$89.2	7	$ 83.4	16	$ 71.3

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-l 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):

	Payments due by period				
Contractual Obligations and Commercial Commitments[1]	Total	Less Than 1 Year	2-3 Years	4-5 Years	More Than 5 Years
Notes payable[2]	$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	—
Totals	$347.0	$21.3	$26.2	$288.0	$11.5

(1) 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.

(2) 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[1]	Cash Discounts[1]	Other (Including Returns)	Medicaid Rebates[2]	Medicaid Administrative Fees[2]	Total
Balance at December 31, 2006	$ 3,388	$ 168	$ 1,767	$ 1,335	$ 205	$ 6,863
Provision related to sales made in current period[3]	22,980	1,353	4,708	3,164	541	32,746
Provision related to sales made in prior period	—	—	—	—	—	—
Returns and credits[4]	(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[3]	22,578	1,700	5,907	3,123	395	33,703
Provision related to sales made in prior period	—	—	—	—	—	—
Returns and credits[4]	(22,688)	(1,667)	(5,594)	(2,340)	(545)	(32,834)
Balance at December 31, 2008	$ 2,468	$ 192	$ 2,359	$ 2,165	$ 37	$ 7,221

[1] Reported as a reduction of accounts receivable.

[2] Reported as an accrued liability.

[3] Approximately 83 percent and 87 percent relates to Abelcet in 2008 and 2007, respectively.

[4] 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%	
	$66,063	$47,180	$11,804	$125,048	$123,239

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-37 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	/s/ Craig A. Tooman
Jeffrey H. Buchalter Chairman, President, and Chief Executive Officer (Principal Executive Officer)	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).

Exhibit Number	Description	Reference No.
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/ Victor P. Micati Victor P. Micati	Director	March 6, 2009
/s/ Phillip M. Renfro Phillip M. Renfro	Director	March 6, 2009
/s/ Robert C. Salisbury Robert C. Salisbury	Director	March 6, 2009
/s/ Jack Geltosky Jack Geltosky	Director	March 6, 2009

ENZON PHARMACEUTICALS, INC. AND SUBSIDIARIES

Index

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
ASSETS		
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	$ 349,253	$ 420,357
LIABILITIES AND STOCKHOLDERS' EQUITY		
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	$ 349,253	$ 420,357

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	$ (2,715)	$ 83,053	$ 21,309
(Loss) earnings per common share — basic	$ (0.06)	$ 1.89	$ 0.49
(Loss) earnings per common share — diluted	$ (0.06)	$ 1.29	$ 0.46
Weighted-average shares — basic	44,398	43,927	43,600
Weighted-average shares — diluted	44,398	72,927	61,379

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 Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Number of Shares	Par Value				
Balance, December 31, 2005	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
Balance, December 31, 2006	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
Balance, December 31, 2007	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
Balance, December 31, 2008	45,032	$450	$345,088	$(1,649)	$(302,228)	$ 41,661

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	$ 79,711	$ 40,053	$ 20,706

The accompanying notes are an integral part of these 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.

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

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

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

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.

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.

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
	$128,812	$674	$(2,335)	$127,151

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

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
	$199,516	$418	$(356)	$199,578

* 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
	$126,434	$717	$127,151

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

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
	$125,047	$123,239

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[1]	$82,840	$(1,454)	$10,103	$(439)
Auction rate securities	717	(138)	—	—
Other[2]	3,460	(304)	—	—
Total	$87,017	$(1,896)	$10,103	$(439)

(1) 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.

(2) 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

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
	$16,268	$22,297

(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	
	$44,585	$45,312	

* 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).

(7) Intangible Assets

Intangible assets consist of the following (in thousands):

	December 31, 2008				December 31, 2007		
	Cost	Accumulated Amortization	Net	Remaining Useful Lives[1]	Cost	Accumulated Amortization	Net
Oncaspar							
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
DepoCyt							
Marketing rights	12,186	7,312	4,874	4.0 years	12,186	6,093	6,093
Abelcet							
Patents	15,000	5,000	10,000	6.0 years	15,000	3,333	11,667
SCA							
Patents[2]	1,875	1,875	—	—	1,875	1,875	—
	$100,569	$39,915	$60,654	5.6 years	$95,569	$27,428	$68,141

[1] Weighted average remaining useful lives.

[2] 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.

(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
Current		
4.0% Convertible Senior Notes repurchased in January 2009	$ 2,950	$ —
4.5% Convertible Subordinated Notes due July 1, 2008	$ —	$ 72,391
Long-Term		
4% Convertible Senior Notes due June 1, 2013.....	$267,550	$275,000

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.

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
	$28,701	$23,650

(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.

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
	40,107

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)[1]:			
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	$(4,690)	$83,793	$ 21,985

[1] Information has not been tax-effected due to an estimated annual effective tax rate of zero.

(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
Earnings Per Common Share — Basic:			
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
Earnings Per Common Share — Diluted:			
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

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	$2,117	$7,741	$9,858

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.

(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.

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	8,372	$11.30	6.58	$1,733
Vested and expected to vest at December 31, 2008	7,726	$11.56	6.49	$1,651
Exercisable at December 31, 2008	6,021	$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

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	1,760	$8.31

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

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

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
Current:			
Federal	$224	$1,331	$127
State	31	194	456
Foreign	49	408	175
Total current	304	1,933	758
Deferred:			
Federal	—	—	—
State	—	—	—
Total deferred	—	—	—
Income tax provision	$304	$1,933	$758

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
Add (deduct) effect of:			
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)
Income tax provision	$ 304	$ 1,933	$ 758

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	$ —	$ —

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.

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.

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

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.

(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	$22,582

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

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®, 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.

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[1]	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[2]	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

[1] 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.

[2] 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	$ (2,411)	$ 84,986	$ 22,067

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	$196,938	$185,601	$185,653

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	$196,938	$185,601	$185,653

(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)	1,516	(1,745)	(2,020)	(466)
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	(2,786)	(1,959)	87,530*	268
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)

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

[1] Amounts are recognized as bad debt expense.

[2] Amounts are recognized as reductions from gross sales.

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EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following exhibits are either filed herewith or have been previously filed with the Securities and Exchange Commission and are filed herewith by incorporation by reference:

- Enzon's Amended and Restated Certificate of Incorporation,
- Enzon's Amended and Restated By-Laws,
- Instruments Defining the Rights of Security Holders, including Indentures,
- Material Contracts, including certain compensatory plans available only to officers and/or directors,
- Statement re: Computation of Ratios,
- Subsidiaries of the Registrant,
- Consents of Expert and others,
- CEO and CFO certifications under Sections 302 and 906 of the Sarbanes-Oxley Act of 2002.

A more detailed exhibit index has been filed with the SEC. Stockholders may obtain copies of that index, or any of the documents in that index, by writing to Enzon Pharmaceuticals, Inc., Investor Relations, 685 Route 202/206, Bridgewater, NJ, 08807, or on the Internet at http://www.sec.gov.

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CORPORATE INFORMATION

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 "anticipate" 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. 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 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 of these and other factors that could affect results is contained in our U.S. Securities and Exchange Commission (SEC) filings, including our Annual Report on Form 10-K for the year ended December 31, 2008. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. We do not intend to update forward-looking statements.

INVESTOR RELATIONS

Updated information about Enzon is available on the Company's website at www.enzon.com. Enzon.com includes summaries of the Company's technologies, products, and other corporate information. In addition, interested parties can also request e-mail alerts and access press releases and filings with the SEC through the investors' information section of Enzon's website. Copies of press releases can also be obtained through an e-mail request to investor@enzon.com. A copy of our Code of Conduct is also available on the Corporate Governance page on our website or upon request, without charge, by contacting our Investor Relations Department by calling 908-541-8777 or through an e-mail request to investor@enzon.com.

CORPORATE GOVERNANCE DOCUMENTS

Our Board of Directors has adopted a Code of Conduct that is applicable to all of our directors, officers and employees. Any material changes made to our Code of Conduct or any waivers granted to any of our directors and executive officers will be publicly disclosed by filing a current report on Form 8-K within four business days of such material change or waiver. Copies of the charters of the Finance and Audit Committee, the Governance and Nominating Committee, and the Compensation Committee of our Board of Directors, which comply with the corporate governance rules of the NASDAQ Stock Market LLC, are available on the Corporate Governance page on our website at www.enzon.com.

REGISTRAR AND TRANSFER AGENT

The transfer agent is responsible for, among other things, handling shareholder questions regarding lost stock certificates, address changes including duplicate mailings, and changes in ownership or name in which shares are held. These requests may be directed to the transfer agent at the following address:

Continental Stock Transfer & Trust Company
17 Battery Place, 8th Floor
New York, NY 10004
(212) 509-4000

Our common stock is traded on the NASDAQ Stock Market LLC under the symbol: ENZN

ANNUAL SHAREHOLDERS' MEETING

The annual shareholders' meeting will be held at 9:00 a.m. local time on Thursday, May 21, 2009, at the Doubletree Hotel & Executive Meeting Center, 200 Atrium Drive, Somerset, NJ 08873.

ANNUAL REPORT ON FORM 10-K

A copy of Enzon's Annual Report on Form 10-K for the year ended December 31, 2008, is included within this Annual Report and is incorporated herein by reference.

ENZON TRADEMARKS

Abelcet®
Adagen®
Customized Linker Technology™
Oncaspar®
Other trademarks and trade names used in this Annual Report are the property of their respective owners.

EQUAL OPPORTUNITY STATEMENT

Enzon Pharmaceuticals, Inc. is an equal opportunity employer, and does not discriminate against any individual on the basis of sex, gender, race, color, national origin, religion, ethnicity, sexual orientation or other characteristic protected by law.

CORPORATE HEADQUARTERS

Enzon Pharmaceuticals, Inc.
685 Route 202/206
Bridgewater, NJ 08807
(908) 541-8600

ENZON'S EXECUTIVE MANAGEMENT

Jeffrey H. Buchalter
Chairman, President
and Chief Executive Officer

Paul Davit
Executive Vice President,
Human Resources

Ralph del Campo
Executive Vice President,
Technical Operations

Dr. Ivan Horak
Executive Vice President,
Research and Development and
Chief Scientific Officer

Craig Tooman
Executive Vice President, Finance
and Chief Financial Officer

ENZON'S BOARD OF DIRECTORS

Jeffrey H. Buchalter (Chairman)
Dr. Goran Ando
Rolf Classon
Dr. Jack Geltosky
Robert LeBuhn
Victor Micati
Phillip Renfro
Robert Salisbury

AUDITORS

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Short Hills, NJ

SEC COUNSEL

Goodwin Proctor LLP
New York, NY

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