SPECTRUM PHARMACEUTICALS INC
Form 10-K
March 02, 2012
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2011

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

Commission File Number: 001-35006

SPECTRUM PHARMACEUTICALS, INC.®

(Exact Name of Registrant as Specified in its Charter)

Delaware	**93-0979187**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

11500 South Eastern Avenue, Suite 240

Henderson, Nevada 89052

(Address of principal executive offices)

(702) 835-6300

(Registrant s telephone number, including area code)

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

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.001 par value	The NASDAQ Stock Market, LLC
Rights to Purchase Series B Junior Participating Preferred Stock	

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 x

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x 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, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer x

Non-accelerated filer ¨ (Do not check if a smaller reporting company) 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 x

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2011 was $476,678,158 based on the closing sale price of such common equity on such date.

As of February 16, 2012 there were 59,271,035 shares of the registrant s common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant s Proxy Statement for the registrant s 2012 Annual Meeting of Shareholders, to be filed on or before April 30, 2012, are incorporated by reference into Part III, Items 10-14 of this Annual Report on Form 10-K.

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FORWARD-LOOKING STATEMENTS

Spectrum Pharmaceuticals, Inc. s Annual Report on Form 10-K contains certain forward-looking statements. These forward-looking statements involve a number of risks and uncertainties. These forward-looking statements can generally be identified as such because the context of the statement will include certain words, including but not limited to, believes, may, will, expects, intends, estimates, anticipates, plans, seeks, continues, predicts, potential, likely, or opportunity, and also contains predictions, estimates and other forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and in reliance upon the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs of the Company s management, as well as assumptions made by and information currently available to the Company s management. Readers of this Annual Report on Form 10-K should not put undue reliance on these forward-looking statements, which speak only as of the time this Annual Report on Form 10-K was filed with the Securities and Exchange Commission, or SEC. Reference is made in particular to forward-looking statements regarding the success, safety and efficacy of our drug products, product approvals, product sales, revenues, development timelines, product acquisitions, liquidity and capital resources and trends. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. Spectrum Pharmaceuticals, Inc. s actual results may differ materially from the results projected in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in this Report, including the Risk Factors in Item 1A Risk Factors , and in Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations included in Part II. In addition, past financial or operating performance is not necessarily a reliable indicator of future performance, and you should not use our historical performance to anticipate results or future period trends. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition. Except as required by law, we do not undertake to update any such forward-looking statements and expressly disclaim any duty to update the information contained in this Annual Report on Form 10-K.

Unless the context otherwise requires, all references in this Annual Report on Form 10-K to the Company , we, us, our, Spectrum and Spe Pharmaceuticals refer to Spectrum Pharmaceuticals, Inc. and its subsidiaries and other consolidated entities, as a consolidated entity. We primarily conduct all our activities as Spectrum Pharmaceuticals.

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PART I

Item 1. ***Business***

Overview

We are a biotechnology company with fully integrated commercial and drug development operations with a primary focus in hematology and oncology. Our strategy is comprised of acquiring, developing and commercializing a broad and diverse pipeline of late-stage clinical and commercial products. In the United States, or the U.S., we market two oncology drugs, ZEVALIN® and FUSILEV® and have two drugs, apaziquone and belinostat, in late stage development along with a diversified pipeline of novel drug candidates. In January 2012 we entered into an agreement to acquire licensing rights to market ZEVALIN outside of the U.S. ZEVALIN is currently approved for sale in more than 40 countries.

We have assembled an integrated in-house scientific team, including formulation development, clinical development, medical affairs, regulatory affairs, biostatistics and data management, and have established a commercial infrastructure for the marketing of our drug products. We also leverage the expertise of our worldwide partners to assist in the execution of our strategy. Apaziquone is presently being studied in two large Phase 3 clinical trials for non-muscle invasive bladder cancer, or NMIBC, under strategic collaborations with Allergan, Inc., or Allergan, Nippon Kayaku Co. Ltd., or Nippon Kayaku, and Handok Pharmaceuticals Co. Ltd., or Handok. Belinostat, is being studied in multiple indications including a Phase 2 registrational trial for relapsed or refractory peripheral T-cell lymphoma, or PTCL, under a strategic collaboration with TopoTarget A/S, or TopoTarget.

Our business strategy is comprised of the following initiatives:

Maximizing the growth potential of our marketed drugs, ZEVALIN and FUSILEV. Our near-term outlook largely depends on sales and marketing successes for our two marketed drugs. For ZEVALIN, we stabilized sales in 2009 after several years of declining sales and continue to work on growing the ZEVALIN brand, expand usage in Non-Hodgkins Lymphoma and expand indications through additional trials. We intend to increase our sales and marketing activities related to ZEVALIN as evidenced by the January 2012 agreement to acquire licensing rights to market ZEVALIN outside of the U.S. For FUSILEV, we are working to expand usage in colorectal cancer. We have initiated and continue to build appropriate infrastructure and additional initiatives to facilitate broad customer reach and to address other market requirements, as appropriate. We have formed a dedicated commercial organization comprised of highly experienced and motivated sales representatives, account managers, and a complement of other support marketing personnel to manage the sales and marketing of these drugs. In addition our scientific department supports field activities through various M.D.s, Ph.D.s and other medical science liaison personnel.

For FUSILEV, which we launched in August 2008, we were able to benefit from broad utilization in community clinics and hospitals and recognized a dramatic increase in sales beginning in the second half of 2010 due to a shortage of generic leucovorin. There has been a history of recurring and unreliable supply of generic leucovorin. In April 2011, we received two FDA approvals for FUSILEV. The first FDA approval was for the use of FUSILEV in combination with 5-fluorouracil in the palliative treatment of patients with advanced metastatic colorectal cancer. The second FDA approval was for a Ready-To-Use, or RTU, formulation of FUSILEV. We are now actively engaged in marketing FUSILEV for use in advanced metastatic colorectal cancer and have engaged a focused commercial sales organization to work with our commercial group to support efforts to grow FUSILEV sales.

Optimizing our development portfolio and maximizing the asset values of its components. While over the recent few years, we have evolved from a development-stage to a commercial-stage pharmaceutical company, we have maintained a highly focused development portfolio. Our strategy with regard to our development portfolio is to focus on late-stage drugs and to develop them safely and expeditiously to the point of regulatory approval. We plan to develop some of these drugs ourselves or with our subsidiaries and affiliates, or secure collaborations with third parties such that we are able to suitably monetize these assets.

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We have assembled a drug development infrastructure that is comprised of highly experienced and motivated M.D.s, Ph.D.s, clinical research associates and a complement of other support personnel to develop these drugs. During 2009, we achieved our goal of completing enrollment in the two Phase 3 apaziquone trials (with more than 1,600 patients enrolled) and finished the evaluation of the last patient in December 2011. We expect to file an NDA for apaziquone in 2012. We continue to work to maximize the value of apaziquone through further developmental efforts and additional trials.

With regard to our anti-cancer drug belinostat, a novel HDAC inhibitor, we have to date opened more than 100 clinical sites. We completed enrollment in September 2011, and expect to file an NDA in 2012. Belinostat has received Fast Track designation from the U. S. Food and Drug Administration, or the FDA, which means, if the FDA agrees, we can start filing a rolling new-drug application even before the clinical package is ready, beginning with the filing of pre-clinical data and Chemistry Manufacturing and Control.

We have several other exciting compounds in earlier stages of development in our portfolio. Based upon a criteria-based portfolio review, we are in the process of streamlining our pipeline drugs, allowing for greater focus and integration of our development and commercial goals.

Expanding our pipeline of development stage and commercial drugs through business development activities. It is our goal to identify new strategic opportunities that will create strong synergies with our currently marketed drugs and identify and pursue partnerships for out-licensing certain of our drugs in development. To this end, we will continue to explore strategic collaborations as these relate to drugs that are either in clinical trials or are currently on the market. We believe that such opportunistic collaborations will provide synergies with respect to how we deploy our internal resources. In this regard, we intend to identify and secure drugs that have significant growth potential either through enhanced marketing and sales efforts or through pursuit of additional clinical development. In January 2011, we entered into an agreement with Viropro, Inc. for the development of a biosimilar version of the monoclonal antibody drug rituximab. Biosimilars, or follow-on biologics, are terms used to describe officially-approved subsequent versions of innovator biopharmaceutical products made by a different sponsor following patent and exclusivity expiry. Under the agreement, we paid a nominal upfront payment and are required to make additional payments based on certain development, regulatory and sales milestones should we elect to continue development efforts. In late January 2012, we entered into a co-development and commercialization agreement with Hanmi Pharmaceutical Company for SPI-2012 (formerly known as LAPS-GCSF), a drug for the treatment of chemotherapy induced neutropenia. We believe our in-licensing of belinostat, a novel histone deacetylase, or HDAC, inhibitor, is also demonstrative of such business development efforts outlined above.

Managing our financial resources effectively. We remain committed to fiscal discipline, a policy which has allowed us to become well capitalized among our peers, despite a very challenging capital markets environment beginning in 2009 and continuing through 2011. This policy includes the pursuit of non-dilutive funding options, prudent expense management, and the achievement of critical synergies within our operations in order to maintain a reasonable burn rate. Even with the continued build-up in operational infrastructure to facilitate the marketing of our two commercial drugs, we intend to be fiscally prudent in any expansion we undertake.

In terms of revenue generation, we rely on sales from currently marketed drugs and intend to pursue out-licensing of select pipeline drugs in select territories, as discussed above. When appropriate, we may pursue other sources of financing, including non-dilutive financing alternatives. While we are currently focused on advancing our key drug development programs, we anticipate that we will make regular determinations as to which other programs, if any, to pursue and how much funding to direct to each program on an ongoing basis, based on clinical success and commercial potential, including termination of our existing development programs, especially if we do not expect value being realized from continued development.

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Further enhancing the organizational structure to meet our corporate objectives. We have highly experienced staff in pharmaceutical operations, clinical development, regulatory and commercial functions who previously held positions at both small to mid-size biotech companies, as well as large pharmaceutical companies. We have strengthened the ranks of our management team, and will continue to pursue talent on an opportunistic basis. Finally, we remain committed to running a lean and efficient organization, while effectively leveraging our critical resources.

Recent Developments

In 2011 and early 2012, we have continued to execute on our business strategy described above. We discuss below the key developments during that period.

In January 2011, we entered into an agreement with Viropro, Inc. for the development of a biosimilar version of the monoclonal antibody drug rituximab.

In April of 2011, we received two FDA approvals for FUSILEV. The first FDA approval was for the use of FUSILEV in combination with 5-fluorouracil in the palliative treatment of patients with advanced metastatic colorectal cancer. The second FDA approval was for an RTU formulation of FUSILEV. We recorded approximately $181 million in product sales for the year 2011 as compared to $61 million in 2010 of which FUSILEV sales were $153 million as compared to $32 million in 2010.

In November 2011, we received approval from the FDA to remove the pre-treatment biodistribution evaluation requirement, commonly referred to as the bioscan from the ZEVALIN administration procedures.

In December 2011, at the Annual Meeting of the American Society of Hematology in San Diego, California, a total of 19 scientific papers on ZEVALIN were presented. Of these, 5 papers were selected by the program committee of ASH for oral presentation. Encouraging data were seen in diverse patient groups, including those with newly diagnosed follicular lymphoma, relapsed/refractory follicular lymphoma, marginal zone lymphoma and patients who have received autologous or allogeneic transplantation. One oral presentation was recognized with special distinction as having the potential impact of changing the standard of care from current therapeutic approaches. Additionally, there were four abstracts related to using ZEVALIN for consolidation after response to chemotherapy. All studies presented at this meeting were investigator-sponsored studies.

In January 2012, we entered into an agreement to acquire licensing rights to market ZEVALIN, outside of the U.S., from Bayer Pharma AG. ZEVALIN is currently approved for sale in more than 40 countries for the treatment of B-cell non-Hodgkin lymphoma, including countries in Europe, Latin America and Asia. Under the agreement, Spectrum will have marketing rights, patents, and access to existing inventory of ZEVALIN from Bayer. Spectrum intends to utilize a combination of company resources and partnerships to support the product outside the U.S.

In late January 2012, we entered into a co-development and commercialization agreement with Hanmi Pharmaceutical Company for SPI-2012 (formerly known as LAPS-GCSF), a drug for the treatment of chemotherapy induced neutropenia based on Hanmi's proprietary LAPSCOVERY Technology. We expect to initiate Phase 2 trials in collaboration with Hanmi in 2012. If SPI-2012 is ultimately commercialized, we will have worldwide rights except for Korea, China and Japan.

We expect to receive top-line data in 2012 from two Phase 3 pivotal clinical trials for apaziquone. The two trials enrolled more than 1,600 patients with non-muscle invasive bladder cancer.

Through the above-referenced agreements and our continued efforts, we strive to continue to build a global pharmaceutical organization in 2012. For two of our non-U.S. business entities, Spectrum Pharma Canada, Inc., a Canadian affiliate headquartered in the Province of Quebec, Canada, and OncoRx Pharma Private Ltd., a wholly-owned Indian subsidiary headquartered in Mumbai, India, we continue to grow and establish these entities in an effort to facilitate the opening of clinical trials sites in these countries to advance the clinical development of our products at a reduced cost.

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Product Portfolio

We have a product portfolio consisting of both commercial stage and development stage products. While we are committed to growing the sales of our marketed products, we strive to maintain a robust pipeline of products under development to bring to market.

Our drug products, their approved and/or target indications, and status of development are summarized in the following table, and discussed below in further detail:

Some of our drugs may prove to be beneficial in additional disease indications as we continue their study and development. In addition, we have intellectual property rights to neurology compounds that we may out-license to third parties for further development.

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Overview of Cancer

According to the American Cancer Society s publication *Cancer Facts & Figures 2011*, cancer is the second leading cause of death in the U.S., accounting for approximately 25% of all deaths. In the U.S., approximately 1.6 million new cancer cases were expected to be diagnosed in 2011 and over 572,000 persons were expected to die from the disease in 2011. Accordingly, there is significant demand for improved and novel cancer treatments.

Cancer develops when cells in a part of the body begin to grow out of control. Although there are many kinds of cancer, they all start because of out-of-control growth of abnormal cells. Normal body cells grow, divide, and die in an orderly fashion. During the early years of a person s life, normal cells divide more rapidly until the person becomes an adult. After that, cells in most parts of the body divide only to replace worn-out or dying cells and to repair injuries. Because cancer cells continue to grow and divide, they are different from normal cells. Instead of dying, they outlive normal cells and continue to form new abnormal cells.

Cancer cells may develop because of damage to DNA. Most of the time, when DNA becomes damaged, the body is able to repair it. In cancer cells, the damaged DNA is not repaired. People can inherit damaged DNA, which accounts for inherited cancers. More often, however, a person s DNA becomes damaged by exposure to something in the environment, such as smoking or a virus.

Cancer usually forms as a tumor. Some cancers, like leukemia, do not form tumors. Instead, these cancer cells involve the blood and blood-forming organs and circulate through other tissues where they may grow. Often, cancer cells travel to other parts of the body where they begin to grow and replace normal tissue. This process is called metastasis. Regardless of where a cancer may spread, however, it is always named for the place it began. For instance, breast cancer that spreads to the liver is still called breast cancer, not liver cancer.

Different types of cancer can behave very differently. For example, lung cancer and breast cancer are very different diseases. They grow at different rates and respond to different treatments. That is why people with cancer need treatment that is aimed at their particular kind of cancer. Cancer is currently treated by surgery, chemotherapy, radiation therapy, hormonal therapy, biological therapy and immunotherapy. Cancer is referred to as refractory when it has not responded, or is no longer responding, to a treatment.

We are seeking novel drugs that address cancer or cancer related indications with significant unmet medical need, that:

- are already approved for sale or have demonstrated initial safety and efficacy in clinical trials and/or we believe have a higher probability of regulatory approval than that of a typical compound at a similar stage of development;
- target cancer indications with significant unmet medical need, where current treatments either do not exist or are not deemed to be effective; and
- we believe we can acquire at a fair value based on our judgment of clinical success and commercial potential.

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Development of Our Drug Products

ZEVALIN ([90Y]-ibritumomab tiuxetan): In December 2008, we acquired rights to commercialize and develop ZEVALIN in the U.S., as the result of a transaction with Cell Therapeutics, Inc., or CTI as further described below. In January 2012, we entered into an agreement with Bayer Pharma AG to acquire licensing rights to market ZEVALIN outside of the U.S.

As part of the ZEVALIN therapeutic regimen, the Y-90 radioisotope is combined with a monoclonal antibody (CD20 MAB) that specifically recognizes a particular part of a B-cell (the cells of the immune system that make antibodies to invading pathogens) called the CD20 antigen. The CD20 antigen is found on malignant and normal B-cells. As the patient is infused with Y-90 ZEVALIN and it enters the bloodstream, the antibody portion recognizes and attaches to the CD20 antigen on tumor cells, allowing the radiation energy emitted from the Y-90 radioisotope (*i.e.*, beta emission) to penetrate and damage the malignant B-cells as well as nearby neighboring cells, many of which are also lymphoma cells.

ZEVALIN was approved by the FDA in February of 2002 for the treatment of follicular non-Hodgkin s lymphoma, or NHL. ZEVALIN was approved as part of a ZEVALIN therapeutic regimen for treatment of relapsed or refractory, low-grade or follicular B-cell NHL, including patients with rituximab-refractory follicular NHL. For reference, the term refractory refers to lymphoma that does not respond to a particular therapy. The term relapsed refers to lymphoma that returns after initially responding to therapy. The terms low-grade and follicular refer to types of lymphoma cells as determined by laboratory and microscopy tests, which have an indolent (slow growing) clinical course. Rituximab is a monoclonal antibody that specifically recognizes a particular part of a B-cell also called the CD 20 antigen, and is used as monotherapy or in combination with other agents for the treatment of B-cell NHL.

NHL is caused by the abnormal proliferation of white blood cells and normally spreads through the lymphatic system, a system of vessels that drains fluid from the body. There are many different types of NHL which can be divided into aggressive NHL, a rapidly spreading acute form of the disease, and indolent NHL, which progresses more slowly, and can be classified as either B-cell or T-cell NHL. According to the National Cancer Institute s SEER database there were nearly 400,000 people in the U.S. with NHL in 2004. The American Cancer Society estimated that in the U. S. 66,360 people were expected to be newly diagnosed with NHL in 2011. Additionally, approximately 19,320 were expected to die from this disease in 2011.

In December 2008, the FDA accepted for filing and review, and granted priority review status for RIT Oncology, LLC s or RIT s, supplemental biologics license application, or sBLA for the use of ZEVALIN as first-line therapy for patients with a previously untreated follicular NHL who achieve a partial or complete response of first-line chemotherapy.

The sBLA was based upon data from the multinational, randomized Phase 3 First-line Indolent Trial, or FIT, which evaluated the efficacy and safety of a single infusion of ZEVALIN in 414 patients with CD20-positive follicular NHL who had achieved a partial response or a complete response after receiving one of the standard first-line chemotherapy regimens. The FIT trial demonstrated that when used as a first-line consolidation therapy for patients with follicular NHL, ZEVALIN significantly improved the median progression-free survival time from 18 months (control arm) to 38 months (ZEVALIN arm) ($p<0.0001$).

The primary investigators of the study concluded that ZEVALIN consolidation of first remission in advanced stage follicular NHL is highly effective, resulting in a total complete response (CR + CRu) rate of 87 percent and prolongation of median progression-free survival by almost two years, with a toxicity profile comparable to that seen with ZEVALIN s use in relapsed or refractory indications. In September 2009, we received FDA approval for the sBLA.

Additionally, in November 2009, the Centers for Medicaid & Medicare Services or the CMS decided that ZEVALIN should be reimbursed under an Average Sales Price, or ASP, methodology in the Hospital Outpatient Prospective Payment System, or HOPPS, and issued a corresponding proposed rule, which went into effect on January 1, 2010. The ASP methodology is widely used for injectable chemotherapy drugs and creates a consistent reimbursement standard in the hospital setting.

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In December 2011 at the Annual Meeting of the American Society of Hematology, or the ASH, in San Diego, California, a total of 19 scientific papers on ZEVALIN were presented. Of these, 5 papers were selected by the program committee of ASH for oral presentations. Encouraging data were seen in diverse patient groups, including those with newly diagnosed follicular lymphoma, relapsed/refractory follicular lymphoma, marginal zone lymphoma and patients who have received autologous or allogeneic transplantation. One oral presentation was selected for a special recognition as having the potential to change the standard of care for these patients. Additionally, there were four abstracts related to using ZEVALIN for consolidation after response to chemotherapy. All studies presented at this meeting were investigator-sponsored studies.

The following describes the principal commercial terms relating to ZEVALIN licensing and development:

On December 15, 2008, we closed a transaction to form a 50/50 owned joint venture in an entity called RIT Oncology, LLC or RIT, with CTI. CTI previously acquired the U.S. rights to develop, market and sell ZEVALIN from Biogen Idec, Inc., or Biogen on December 21, 2007.

Upon entering into the joint venture arrangement, CTI contributed the ZEVALIN product assets to RIT in exchange for a 50% membership interest in RIT and the cash payments to CTI noted below. CTI received an initial cash payment of $7.5 million at the closing of the joint venture transaction on December 15, 2008, and received an additional $7.5 million cash payment in early January 2009. CTI also had the option to sell its remaining 50% membership interest in RIT to us, subject to adjustment for any amounts owed between RIT and CTI at the time of sale. CTI exercised this Put option in February 2009. On March 15, 2009, we entered into an agreement with CTI to complete such sale for an aggregate amount of $16.5 million subject to certain adjustments for, among other things, payables determined to be owed between CTI and RIT. CTI disputed the adjustments, but in a May 2009 arbitration proceeding, we were awarded approximately $4.3 million. As a result of the sale, we own 100% of RIT and are its sole member and therefore, we have, through licenses, all of the U.S. rights to ZEVALIN.

In connection with obtaining the required consent of Biogen to the foregoing joint venture arrangement, we entered into certain agreements with Biogen. Such agreements included:

an amendment to the original asset purchase agreement between CTI and Biogen, referred to as the CTI/Biogen Agreement, modifying future milestone payments, to provide that (i) concurrently with the execution of the amendment CTI was required to pay Biogen $0.2 million (which was reimbursed to CTI by RIT from the initial capital contributions made by CTI and us), (ii) upon the December 2008 closing of the joint venture transaction, CTI was required to pay Biogen an additional $2.0 million (which was paid by RIT as successor to CTI under the amendment), (iii) upon the achievement of the specified FDA approval milestone, RIT (as successor to CTI) was required to pay Biogen an additional amount of $5.5 million if the milestone event occurred in 2009 (provided that RIT may elect to defer any such payment until January 1, 2010, but upon such election the required payment will increase to $6.0 million), $7.0 million if the milestone event occurs in 2010, $9.0 million if the milestone event occurs in 2011, or $10.0 million if the milestone event occurs in 2012 or later. As disclosed above, in 2009 we received FDA approval for the treatment of patients with previously untreated follicular NHL who achieve a partial or complete response to first-line chemotherapy and in accordance with the amendment, we paid Biogen $5.5 million. No other material terms of the CTI/Biogen Agreement were modified. CTI s rights and obligations, including its payment obligations to Biogen, including royalties on net sales of ZEVALIN and an additional regulatory milestone payment, under both the CTI/Biogen Agreement and the amendment were assigned to and assumed by RIT in connection with the closing of the joint venture transaction.

an amendment to the original supply agreement between Biogen and CTI, referred to as the CTI/Biogen Supply Agreement, modifying certain of the pricing and manufacturing technology transfer terms contained in the CTI/Biogen Supply Agreement and also providing that the term of the agreement may be shortened in some instances in the event of a mid-term manufacturing technology transfer. CTI s rights and obligations, including its payment obligations to Biogen, under both the CTI/Biogen Supply Agreement and the amendment were assigned to and assumed by RIT in connection with the closing of the joint venture transaction.

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a security agreement, by and between RIT and Biogen whereby RIT granted to Biogen a first priority security interest in all of RIT s assets, including the assets contributed to RIT by CTI in connection with the closing of the joint venture transaction, to secure certain payment, indemnification and other obligations of RIT to Biogen.

a guarantee, by us for the benefit of Biogen whereby we have, among other things, guaranteed the payment and performance all of RIT s obligations to Biogen (including its obligations as assignee of CTI under all contractual arrangements between CTI and Biogen that were assigned to and assumed by RIT in connection with the closing of the joint venture transaction).

pursuant to the transfer of ZEVALIN assets from CTI to RIT in December 2008, RIT assumed certain license and sublicense agreements with various third parties related to ZEVALIN intellectual property under which RIT is required to make certain payment obligations including milestone payments and royalties.

In January 2012, we entered into an agreement to acquire licensing rights to market ZEVALIN outside of the U.S. from Bayer Pharma AG. ZEVALIN is currently approved for sale in more than 40 countries outside the U.S. for the treatment of B-cell non-Hodgkin lymphoma, including countries in Europe, Latin America and Asia. Under the agreement, Spectrum will have marketing rights, patents, and access to existing inventory of ZEVALIN from Bayer. Spectrum plans to utilize a combination of company resources and partnerships to support the product outside the U.S.

FUSILEV® (levoleucovorin) for injection: On March 7, 2008, our new drug application or NDA for our proprietary drug FUSILEV was approved by the FDA. We commercially launched FUSILEV in August 2008, with an in-house sales force and commercialization team. Subsequent to the launch, in November 2008, we received a unique J-code for FUSILEV from CMS, which went into effect on January 1, 2009. The J-code is a unique, product-specific billing code that assists providers (*e.g.*, physicians that prescribe FUSILEV) in obtaining reimbursement for FUSILEV.

FUSILEV is a novel folate analog formulation and the pharmacologically active isomer (the *levo*-isomer) of the racemic compound, calcium leucovorin. Isomers are compounds with the same molecular formula, but mirror image atomic structures. Leucovorin is a mixture of equal parts of both isomers: the pharmacologically active *levo*-isomer and the inactive *dextro*-isomer. Preclinical studies have demonstrated that the inactive *dextro*-isomer may compete with the active *levo*-isomer for uptake at the cellular level. By removing the inactive *dextro* form, the dosage of FUSILEV is one-half that of leucovorin and patients are spared the administration of an inactive substance.

FUSILEV rescue is indicated after high-dose methotrexate therapy in patients with osteosarcoma, and to diminish the toxicity and counteract the effects of impaired methotrexate elimination or inadvertent overdose of folic acid antagonists. FUSILEV has been designated as an orphan drug for its approved indications. Methotrexate is a widely used anti-cancer drug. It is a therapeutic option in the treatment of solid tumors and hematological malignancies, such as NHL. In addition, methotrexate is also used to treat autoimmune diseases such as rheumatoid arthritis and psoriasis.

The American Cancer Society estimated that the 2011 incidence of colorectal cancer in the U. S. would be approximately 141,210 and is the third most common cancer in both men and women. Leucovorin is currently a standard combination agent with 5-FU in various colorectal cancer treatment regimens. Leucovorin potentiates the effects of 5-FU and its derivatives by stabilizing the binding of the drug s metabolite to its target enzyme, thus prolonging drug activity. There are peer-reviewed publications wherein FUSILEV is used in place of the leucovorin in combination with 5-FU containing regimens for adjuvant and advanced colorectal cancer and in combination with oxaliplatin and/or irinotecan for advanced disease. The National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology™ in colon cancer and rectal cancer have been updated to reflect that FUSILEV is available in the U.S. Additionally, in the fourth quarter of 2008, FUSILEV was listed and continues to be listed in the NCCN Drugs and Biologic Compendium for use in combination with high-dose methotrexate for the treatment of bone cancer (osteosarcoma and de-differentiated chrondrosarcoma). The NCCN Drugs and Biologics Compendium is an important reference that has been recognized by United HealthCare as a formal guidance for coverage policy. In addition, CMS announced in June 2008 that it would recognize the NCCN Drugs & Biologics Compendium as a source of information to determine which drugs may be covered under Medicare Part B.

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The following describes the principal commercial terms relating to FUSILEV licensing and development.

In April 2006, we acquired all of the oncology drug product assets of Targent, Inc. Pursuant to the agreement, as of the end of 2011, Targent has received all payments provided for under the agreement based on the achievement of certain regulatory and sales milestones. We made such payments in a combination of our common stock and cash.

In May 2006, we amended and restated a license agreement with Merck & Cie AG, a Swiss corporation, which we assumed in connection with the acquisition of the assets of Targent. Pursuant to the license agreement with Merck & Cie, we obtained the exclusive license to use regulatory filings related to FUSILEV and a non-exclusive license under certain patents and know-how related to FUSILEV to develop, make, and have made, use, sell and have sold FUSILEV in the field of oncology in North America. In addition, we have the right of first opportunity to negotiate an exclusive license to manufacture, have manufactured, use and sell FUSILEV products outside the field of oncology in North America. Also, under the terms of the license agreement, we paid Merck & Cie $100,000 for the achievement of FDA approval of FUSILEV. Merck & Cie is also eligible to receive a payment upon achievement of another regulatory milestone, in addition to royalties on net sales. The term of the license agreement is determined on a product-by-product and country-by-country basis until royalties are no longer owed under the license agreement. The license agreement expires in its entirety after the date that we no longer owe any royalties to Merck & Cie. We have the unilateral right to terminate the license agreement, in its entirety or on a product-by-product or country-by-country basis, at any time for any reason and either party may terminate the license agreement due to material breach of the terms of the license agreement by or insolvency of the other party.

Apaziquone: Apaziquone is an anti-cancer agent that becomes activated by certain enzymes often present in higher amounts in cancer cells than in normal cells. It is currently being investigated for the treatment of NMIBC, which is a cancer that is only in the innermost layer of the bladder and has not spread to deeper layers of the bladder.

The American Cancer Society estimated that the 2011 incidence and prevalence of bladder cancer in the U.S. would be approximately 69,250 and over 500,000 respectively. According to Botteman et al., (PharmacoEconomics 2003), bladder cancer is the most expensive cancer to treat on a lifetime basis.

The initial treatment of this cancer is complete surgical removal of the tumor. However, bladder cancer is a highly recurrent disease with approximately 75% of patients recurring within 5 years, and a majority of patients recurring within 2 years. This high recurrence rate is attributed to: (1) the highly implantable nature of cancer cells that are dispersed during surgery, (2) incomplete tumor resection, and (3) tumors present in multiple locations in the bladder which may be missed or too small to visualize at the time of resection. Despite evidence in the published literature and guidance from the American and European Urology Associations, instillation of a chemotherapeutic agent immediately following surgery is not a standard clinical practice. Currently, there are no approved drugs for this indication which may, in part, explain the difference between the literature and urology guidelines and actual clinical management of this disease. For more than 30 years, no new drugs have been introduced in the market for treatment of NMIBC. An immediate instillation of apaziquone may help by (1) reducing tumor recurrence by destroying dispersed cancer cells that would otherwise re-implant onto the inner lining of the bladder, (2) by destroying remaining cancer cells at the site of tumor resection (also known as chemo-resection), and (3) by destroying tumors not observed during resection (also known as chemo-ablation).

Apaziquone is a bio-reductive alkylating indoloquinone that is enzymatically activated by enzymes that are over expressed by bladder tumors. Pharmacokinetic studies have verified that apaziquone is rarely detectable in the bloodstream of patients when it is administered either after surgical resection or as a part of a delayed multi-instillation protocol. The proposed dose therefore carries a minimal risk of systemic toxicity which could arise from absorption of a drug through the bladder wall into the bloodstream. Additionally, the current proposed dose is a fraction of the systemic toxic dose. These features of apaziquone are distinct from other intravesical agents currently in use for the treatment of recurrent bladder cancer.

A Phase 1 dose-escalation marker lesion (tumor) study demonstrated that apaziquone had no systemic toxicity, and was well tolerated at the dose level being used in the Phase 3 trials. Apaziquone also demonstrated anti-tumor activity against NMIBC, as evidenced by eight of twelve patients showing a complete response, defined as the complete disappearance of the marker lesion as confirmed by biopsy, after receiving six treatments with apaziquone over a period of six weeks.

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Phase 2 data has confirmed anti-tumor activity in patients with multiple, recurrent NMIBC, as evidenced by 31 of 46 patients (67%) showing a complete response after receiving six weekly treatments with 4 mg of apaziquone instilled into the urinary bladder in this marker lesion study. Apaziquone was well-tolerated, with no significant systemic toxicity, and local toxicity limited to temporary chemical cystitis (inflammation of the urinary bladder) resulting in increased urinary frequency, dysuria (painful urination) and hematuria (blood in the urine) in a few patients. At the two-year follow up, eighteen patients (38%) were disease free.

In September 2005, we initiated an open label, multi-center clinical study in Europe in high-risk NMIBC in 53 patients. Patients with high-risk NMIBC usually have more aggressive bladder cancer with higher incidence of recurrence and/or progression to a more invasive stage, where the cancer invades the muscle wall of the bladder, which may require total surgical removal of the bladder. Apaziquone was well-tolerated over multiple instillations in this study of patients with high-risk superficial bladder cancer. At 18 months follow up 55% of the patients were recurrence free.

In 2006, we performed a 20 patient pilot safety study in low-grade NMIBC. In this study, apaziquone was found to be well tolerated when a single 4 mg dose is given to patients immediately following surgery. In addition, there was no adverse effect on wound healing and apaziquone was not detected in the bloodstream.

In March 2007, we received agreement from the FDA for the design of a Phase 3 study protocol for the treatment of non-invasive bladder cancer under a special protocol assessment procedure. The development plan for apaziquone is two randomized, double-blind, placebo-controlled Phase 3 clinical trials, each with 562 evaluable patients with T_aG1-G2 (low-grade) NMIBC. Patients are being randomized in a one-to-one ratio to apaziquone or placebo. Under the protocol, the patients are given a single 4 mg dose following surgical removal of the tumors. The primary endpoint is a statistically significant difference ($p < 0.05$) in the rate of tumor recurrence at year two between the apaziquone patient group and the placebo group. The first study began during the second quarter of 2007, and the second study began during the third quarter of 2007. In 2008, we received scientific advice from the European Medicines Agency, or the EMEA whereby the EMEA agreed that the two Phase 3 studies as designed should be sufficient for a regulatory decision regarding European registration. In December 2009, we achieved our goal of completing enrollment for both Phase 3 clinical trials and we expect top-line data in 2012.

The following describes the principal commercial terms relating to apaziquone licensing and development.

In October 2008, we terminated our 2001 license agreement for apaziquone with INC Research®, formerly NDDO Research Foundation® or INC in the Netherlands, as the patents underlying the agreement were all about to expire. Pursuant to the termination, INC assigned to us all rights it had in the know-how or intellectual property licensed under the agreement and all rights in may have had in any know-how or intellectual property created during the term of the agreement. In exchange, we paid INC a nominal amount of cash and issued them a nominal number of shares of our common stock. In addition, INC is entitled to up to 25,000 additional shares of our common stock and an additional payment of $300,000 upon achievement of certain regulatory milestones.

In October, 2008, we entered into a license, development, supply and distribution agreement with Allergan pursuant to which we and Allergan agreed to collaboration for the development and commercialization of a formulation of apaziquone suitable for use in treating cancer or precancerous conditions via instillation. The agreement with Allergan also provides that Allergan has the exclusive right to make, develop and commercialize apaziquone for the treatment of bladder cancer, or pre-bladder cancer conditions worldwide except for Asia (as is defined in the agreement). We also entered into a co-promotion agreement with Allergan providing for the joint commercialization of apaziquone in the U.S., whereby we and Allergan will share equally all profits and commercialization expenses.

In consideration for the rights granted under our license, development, supply and distribution agreements with Allergan, Allergan paid us an up-front fee of $41.5 million. In addition, Allergan will pay us up to $302.5 million based on the achievement of certain development, regulatory and sales milestones. For example, for completing enrollment of both aforementioned Phase III trials by year-end 2009, Allergan paid us a $1.5 million milestone payment. Also, Allergan has agreed to pay us tiered royalties starting in the mid-teens based on a percentage of net sales of the apaziquone outside of the U.S.

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We will continue to conduct the current Phase 3 clinical trials as well as certain future planned clinical trials pursuant to a joint development plan, of which Allergan will fund 65% of the development costs. In November 2009, we entered into a collaboration agreement with the Nippon Kayaku Co., LTD. for the development and commercialization of apaziquone in Asia, except North and South Korea (the Nippon Kayaku Territory). In exchange, Nippon Kayaku paid Spectrum an up-front payment of $15 million and agreed to make additional payments of up to $136.0 million based on the achievement of certain regulatory and commercialization milestones contained in the agreement. In addition, Nippon Kayaku received exclusive rights to apaziquone for the treatment of NMIBC in Asia (other than North and South Korea), including Japan and China. Nippon Kayaku will conduct apaziquone clinical trials in the Nippon Kayaku Territory pursuant to a development plan. In addition, Nippon Kayaku will be responsible for all expenses relating to the development and commercialization of apaziquone in the Nippon Kayaku Territory. In January 2011 Nippon Kayaku initiated a Phase 1 study with the first patient being dosed in Japan. The Phase 1 study is required by the local regulatory authorities and is designed to enroll up to 6 patients.

Also in November 2009, we entered into a collaboration agreement with Handok Pharmaceuticals for the development and commercialization of apaziquone in North and South Korea. Under the terms of the Handok collaboration agreement, Handok paid us an up-front payment of $1.0 million and potential milestone payments totaling approximately $18.6 million. The potential milestone payments will be based on the achievement of certain regulatory and commercialization milestones. Handok received rights to apaziquone for the treatment of NMIBC in North and South Korea. Additionally, Handok will conduct the apaziquone clinical trials in North and South Korea pursuant to a development plan and will be responsible for all expenses relating to the development and commercialization of apaziquone in North and South Korea.

Belinostat: Belinostat is a histone deacytelase, or HDAC, inhibitor that is being studied in multiple clinical trials, both as a single drug and in combination with chemotherapeutic drugs for the treatment of various hematological and solid tumors. HDACs catalyze the removal of chemical groups known as acetyl groups from certain portions of human DNA, and thus regulate gene expression. By inhibiting this enzyme, belinostat induces cell cycle arrest, and leads to inhibition of cancer cell proliferation and induction of apoptosis, or cell death. Additional mechanisms of action thought to be responsible for belinostat s anti-cancer effect include inhibition of angiogenesis, or blood vessel growth, and the resensitization of cells that have overcome drug resistance to anticancer drugs, such as platinums and taxanes.

Belinostat is currently the only HDAC inhibitor in clinical development with multiple potential routes of administration, including intravenous administration, continuous intravenous infusion and oral administration, which we believe may afford belinostat with a significant competitive advantage.

Belinostat is currently in a registrational trial, under a special protocol assessment, as a monotherapy for relapsed/refractory Peripheral T-Cell Lymphoma or PTCL an indication which has been granted Orphan Drug and Fast Track designation by the FDA. The registrational trial is an open-label, multicenter, single arm efficacy and safety study, in which we plan to enroll approximately 120 patients with relapsed or refractory peripheral T-cell lymphoma, who have failed at least one prior systemic therapy. We expect to file an NDA for belinostat in PTCL in 2012.

Belinostat is also currently in a randomized Phase 2 trial for carcinoma of unknown primary or CUP, in combination with carboplatin and paclitaxel being conducted by our collaborator, Topotarget. Target enrollment was reached in December 2010 and Topotarget expects top-line results of progression free survival and response rate in the second half of 2012. There are currently no approved therapies or drugs for treatment of CUP, which is an indication with a large patient population. The National Cancer Institute estimated that for 2008, approximately 2 to 4% of all cancers are CUP.

Based on the data from past and ongoing studies, we believe there are many potential attributes associated with belinostat that separate it from other currently marketed HDACs, including efficacy when used alone and in combination, less toxicities (when compared to other currently-marketed HDACs), including less bone marrow

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toxicity, and a lack of other severe side effects, such as mucositis, that may enable full dose combinations of this drug with several other cytotoxic agents. Hence, belinostat is currently being investigated in multiple indications, both as monotherapy and in combination with other treatment regimens. Numerous studies have been conducted, and are ongoing, through the NCI and other well-known oncologic academic institutions. Additionally, we plan on a comprehensive development program for belinostat, which includes both hematologic indications, such as PTCL, and solid tumor indications, such as ovarian cancer, colorectal cancer and CUP. Based upon the foregoing, we believe belinostat potentially has broad applicability and hence, commercial potential beyond that of currently marketed HDACs.

The following describes the principal commercial terms relating to belinostat licensing and development.

In February 2010, we entered into a licensing and collaboration agreement with TopoTarget, for the development and commercialization of belinostat, pursuant to which we agreed to collaboration for the development and commercialization of belinostat. The agreement provides that we have the exclusive right to make, develop and commercialize belinostat in North America and India, with an option for China. The agreement also grants TopoTarget a co-promote option if and only if we do not maintain a minimum number (subject to adjustment for certain events outside of our control) of field personnel (as defined in the agreement) for a certain number of years post-approval of the PTCL indication.

In consideration for the rights granted to us under the license and collaboration agreement with TopoTarget, we paid TopoTarget an up-front fee of $30.0 million. In addition, we will pay up to $313 million and one million shares of Spectrum common stock based on the achievement of certain development, regulatory and sales milestones. as well as certain royalties on net sales of belinostat.

Under the terms of the agreement, all development, including studies, will be conducted under a joint development plan and in accordance with a mutually agreed upon target product profile provided that we have final decision-making authority for all developmental activities in North America and India (and China upon exercise of the option for China) and TopoTarget has final decision-making authority for all developmental activities in all other jurisdictions, We will assume all responsibility for and future costs of the ongoing registrational PTCL trial while TopoTarget will assume all responsibility for and future costs of the ongoing Phase 2 CUP trial. We and TopoTarget will conduct future planned clinical trials pursuant to the joint development plan, of which we will fund 70% of the development costs and TopoTarget will fund 30% of the development costs.

We and TopoTarget will each pay 50% of the costs for chemical, pharmaceutical and other process development related to the manufacturing of the product that are incurred with a mutually agreed upon budget in the joint development plan. TopoTarget is responsible for supplying us with both clinical and commercial product.

Ozarelix: Ozarelix is a Luteinizing Hormone Releasing Hormone, or LHRH, antagonist (a substance that blocks the effects of a natural hormone found in the body). Mechanistically, LHRH antagonists exert rapid inhibition of luteinizing hormone and follicle stimulating hormone with an accompanying rapid decrease in sex hormones and would therefore be expected to be effective in a variety of hormonally dependent disease states including ovarian cancer, prostate cancer, benign prostatic hyperplasia, or BPH, infertility, uterine myoma and endometriosis.

In January 2010, based upon the mixed results of our earlier Phase 2 study of ozarelix for the treatment of BPH and the recently announced failure of Aeterna Zentaris s large, Phase 3, registrational trial of cetrorelix (another LHRH antagonist), we discontinued development of ozarelix in BPH. Currently, we are conducting a randomized phase II clinical trial of ozarelix in prostate cancer patients.

The following describes the principal commercial terms relating to ozarelix licensing and development.

In 2004, we entered into a license agreement with a subsidiary of Aeterna Zentaris, Inc., Aeterna Zentaris GmbH, whereby we acquired an exclusive license to develop and commercialize ozarelix in North America (including Canada and Mexico) and India. In addition, we have a 50% financial interest in any income Aeterna Zentaris derives from ozarelix in Japan. We are contingently obligated to pay amounts based upon achievement of milestones and a royalty based on any future net sales. In November 2010, we amended the terms of the agreement to expand the territory covered by the exclusive license.

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The term of the license agreement expires ten years after the first commercial sale of a product in any country within the territory or as long as any product is covered by a patent in any country in the territory, and where there is no generic competition in such country of the territory, whichever term is longer, although some obligations survive termination. In addition, the agreement may be terminated earlier by either party (in some cases either in whole or on a product-by-product and/or country-by-country and/or indication-by-indication basis), based upon material breach or the commencement of bankruptcy or insolvency proceedings involving the other, or by us upon sixty days notice to Aeterna Zentaris.

Ortataxel: In July 2007, we entered into an exclusive worldwide license agreement for ortataxel, a third-generation taxane with Indena S.p.A. In clinical studies, ortataxel has been shown to be bioavailable when administered orally to patients with solid tumors. In addition, it belongs to a new generation of taxanes with the potential to be active against tumors resistant to paclitaxel (Bristol-Myers Squibb s Taxol®) and docetaxel (Sanofi-Aventis Taxotere®). Phase 1 and 2 studies in more than 350 patients with solid tumors have shown activity in patients that were refractory to treatment with the available taxane drugs. The safety profile of ortataxel is comparable to that of paclitaxel and docetaxel.

While optimizing the oral formulation for better bioavailability, we will consider future studies with the oral formulation.

The following describes the principal commercial terms relating to ortataxel licensing and development.

Under the terms of the license agreement with Indena, we are obligated to make payments based on the achievement of certain development, regulatory filing and sales milestones. We will also pay Indena certain royalties on worldwide sales of ortataxel, if and when the product is approved. On October 11, 2010, we amended the agreement to extend payments of certain development and regulatory milestones.

Also, we are obligated to purchase all of our requirements of ortataxel active pharmaceutical ingredient from Indena.

Lucanthone: Lucanthone is an orally administered small-molecule which inhibits Topoisomerase II and AP endonuclease. In preclinical tests, lucanthone was shown to enhance the sensitivity of animals to an anticancer agent in a time dependent and reversible manner.

Lucanthone was originally used as an antiparasitic agent for the treatment of schistosomiasis in the 1950s and 1960s, and has a demonstrated safety profile. It was later discontinued because better anti-parasitic medications became available. We are currently working on the development plan for lucanthone.

The following describes the principal commercial terms relating to lucanthone licensing and development.

We entered into a license agreement with Dr. Robert E. Bases, the inventor of a method of treating cancer of the central nervous system through the administration of lucanthone and radiation, whereby we acquired worldwide exclusive rights to develop and commercialize a product based upon his invention in May 2005. Under the terms of the license agreement, we made a small up-front payment and are obligated to make additional periodic payments, a payment upon achievement of a certain regulatory milestone and royalties on potential net sales, if any.

SPI-1620: SPI-1620 is a highly selective peptide agonist of endothelin B receptors, which can stimulate receptors on endothelial cells, the innermost layer of cells lining the blood vessels. This technology takes advantage of the fact that the blood supply to tumors is different than the blood supply to healthy organs. Blood vessels in the growing part of tumors are relatively devoid of smooth muscle covering and are rich in endothelial cells. Therefore, by stimulating the endothelial B receptors present on the endothelial cells, SPI-1620 should selectively increase tumor blood flow while spa