
ARIAD®

# 2011 Annual Report



**www.ariad.com**

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

FORM 10-K



(Mark One)

[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
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 0-21696

**ARIAD Pharmaceuticals, Inc.**
(Exact name of registrant as specified in its charter)

| Delaware | 22-3106987 |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |

**26 Landsdowne Street, Cambridge, Massachusetts 02139-4234**
(Address of principal executive offices) (Zip Code)

**Registrant's telephone number, including area code: (617) 494-0400**

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

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common Stock, $.001 par value | The NASDAQ Global Select Market |

**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 [X] 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 [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 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. [X]

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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer [X] Accelerated filer [ ]
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 registrant's common stock held by nonaffiliates of the registrant (without admitting that any person whose shares are not included in such calculation is an affiliate), computed by reference to the price at which the common stock was last sold, as of the last business day of the registrant's most recently completed second fiscal quarter was approximately $1,220,167,480.

As of February 15, 2012, the registrant had 158,929,544 shares of common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

The following documents (or parts thereof) are incorporated by reference into the following parts of this Form 10-K: Certain information required in Part III of this Annual Report on Form 10-K is incorporated from the Registrant's Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders.

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## PART I

### ITEM 1: BUSINESS

The following Business Section contains forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain risks, uncertainties and other factors including the risk factors set forth in Part I, Item 1A of this annual report. Unless the content requires otherwise, references to "ARIAD," "company," "we," "our," and "us," in this annual report refer to ARIAD Pharmaceuticals, Inc. and our subsidiaries.

**Overview**

*Our Business and Strategy*

ARIAD's vision is to transform the lives of cancer patients with breakthrough medicines. Our mission is to discover, develop and commercialize small-molecule drugs to treat cancer in patients with the greatest and most urgent unmet medical need - aggressive cancers where current therapies are inadequate.

We are building a pipeline of product candidates that has the potential to expand and improve upon current treatment options for patients with cancer. Each of our product candidates -- ponatinib, AP26113 and ridaforolimus -- was discovered internally by our scientists based on our expertise in cell-signaling, cancer biology and structure-based drug design. We believe that each of our product candidates has the potential to successfully address an unmet need in the treatment of multiple cancer indications, and we anticipate extensive clinical development in these areas.

Our goal is to build a fully integrated oncology company. We are building a commercial organization to market, distribute and sell our products upon regulatory approval in the United States, Europe and other select markets, worldwide. We have commenced preparations for the potential commercial launch of ponatinib in the United States and Europe, including efforts to expand our marketing and sales teams. In addition, we are in the process of establishing a European headquarters in Switzerland to lead our commercial operations in Europe, in anticipation of the potential approval of the marketing authorization application for ponatinib.

*Our Product Candidates*

Our pipeline currently contains three product candidates - ponatinib, AP26113 and ridaforolimus.

Ponatinib is an investigational, pan BCR-ABL inhibitor that we believe has potential applications in various hematological cancers and solid tumors. We have completed enrollment in our pivotal Phase 2 clinical trial in patients with resistant or intolerant chronic myeloid leukemia, or CML, and Philadelphia positive acute lymphoblastic leukemia, or Ph+ ALL. This trial is designed to provide definitive clinical data for regulatory approval of ponatinib for the treatment of patients with this disease. Subject to further patient follow-up and data analysis in this trial, we expect to file for marketing approval of ponatinib in the United States and Europe in the third quarter of 2012 with potential regulatory approval in the United States as soon as the first quarter of 2013. Subject to obtaining marketing approval, we intend to commercialize ponatinib in the United States and Europe and other select markets worldwide. We also expect to initiate additional clinical trials of ponatinib, including a Phase 3 clinical trial in newly diagnosed CML patients and commence a clinical trial of ponatinib in Japan, in the second half of 2012.

AP26113 is an investigational dual inhibitor of anaplastic lymphoma kinase, or ALK, and epidermal growth factor receptor, or EGFR. We believe that this product candidate has the potential to regulate multiple cancer pathways and to be used in the treatment of certain cancer patients, including those patients with non-small cell lung cancer, certain forms of lymphoma and neuroblastoma. In 2011, we commenced patient enrollment in a Phase 1/2 dose-escalation study in patients with advanced solid tumors, including non-small cell lung cancer, and intend to enter the Phase 2 portion of this trial in 2012.

Depending on the timing of the completion of enrollment, the results of this trial and further discussions with regulatory authorities, we could conduct one or more potential pivotal trials of AP26113 in patients with non-small cell lung cancer commencing in 2013.

Ridaforolimus is an investigational mTOR inhibitor that we discovered internally and later licensed in 2010 to Merck, Sharpe & Dohme Corp., or Merck. Under the license agreement, Merck is responsible for all activities and has agreed to fund 100 percent of the costs related to the development, manufacturing and commercialization of ridaforolimus in oncology. We intend to co-promote ridaforolimus in the United States, if approved. In the third quarter of 2011, Merck filed in both Europe and the United States for regulatory approval of ridaforolimus in patients with metastatic soft-tissue and bone sarcomas who had a favorable response to chemotherapy. Subsequently, Merck filed in other select geographies worldwide. Under the license agreement, Merck has agreed to pay us milestone payments based on successful development of ridaforolimus and achievement of specified sales thresholds, as well as tiered, double-digit royalties on global net sales.

In addition to our lead development programs, we have a focused drug discovery program centered on small-molecule therapies that are molecularly targeted to cell-signaling pathways implicated in cancer. Our drug discovery program builds on our expertise in cell signaling, cancer biology, structure-based drug design and computational chemistry in designing and characterizing small-molecule drug candidates, such as ponatinib, AP26113, and ridaforolimus, to treat life-threatening diseases.

**Our Lead Development Programs**

*Ponatinib*

Ponatinib is an investigational pan BCR-ABL inhibitor that we believe has broad potential applications in various hematological cancers and solid tumors. Ponatinib was internally discovered and is wholly owned by us. Results from preclinical studies showed that ponatinib potently inhibits BCR-ABL, a target protein associated with drug-resistant CML, as well as various mutants of BCR-ABL.

Preclinical studies also showed that ponatinib demonstrated efficacy and oral dosing flexibility in animal models of CML, including forms of CML caused by clinically relevant mutants of BCR-ABL. Significantly, ponatinib potently inhibited a specific mutant, T315I, which is resistant to all currently marketed drugs. Additional preclinical studies demonstrated that ponatinib also inhibits Flt3, a target associated with acute myeloid leukemia, or AML.

In addition, in preclinical studies ponatinib has demonstrated potent inhibition of additional targets implicated in the initiation and progression of multiple cancers, including the receptors for vascular endothelial growth factors, or VEGFRs, fibroblast growth factors, or FGFRs, and angiopoietin, or Tie2. Based on ponatinib's differentiated profile, we believe these findings support the broad potential of this product candidate not only in CML and Ph+ ALL, but also in other hematological cancers, such as AML, and various solid tumors.

In 2008, we initiated a Phase 1 clinical trial of ponatinib in heavily pretreated patients with drug-resistant and refractory CML and other hematologic malignancies. This multi-center, sequential dose-escalation study was designed to determine the safety, tolerability and initial evidence of the anti-leukemic activity of ponatinib, as well as its pharmacokinetics (the behavior of ponatinib in patients) and its pharmacodynamics (the effects of ponatinib on patients' cells).

In September 2011, we announced long-term results of the Phase 1 study of ponatinib in heavily pretreated patients with resistant and refractory CML and Ph+ ALL. With the trial fully enrolled and all patients evaluable, 72% of chronic-phase CML patients treated with ponatinib achieved a major cytogenetic response (MCyR), including 92% of patients who also had the T315I mutation. As of the

announcement of these results, all chronic-phase CML patients who achieved a MCyR since the previous data update in December 2010 remained on treatment in the trial.

We believe that the data from this trial demonstrate strong clinical evidence of durable, hematologic, cytogenic and molecular anti-cancer activity in patients who had failed prior tyrosine kinase inhibitor therapy for CML, including patients with the T315I mutation. The data also show that ponatinib continues to be well-tolerated by patients in the study.

In September 2010, we initiated patient enrollment in a pivotal Phase 2 clinical trial of ponatinib, which we have named the PACE trial, in patients with resistant or intolerant CML and Ph+ ALL. The PACE (**P**onatinib Ph+ **A**LL and **C**ML **E**valuation) trial is designed to provide definitive clinical data for regulatory approval of ponatinib for the treatment of patients with this disease. The PACE trial is a global, single-arm clinical study of oral ponatinib with chronic phase, accelerated phase, or blast phase CML, as well as Ph+ ALL. Patients resistant or intolerant to dasatinib (Sprycel®) or nilotinib (Tasigna®), or with the T315I mutation, were enrolled. Patients were grouped into one of six separate cohorts based on their phase of CML (chronic, accelerated or blast) and their BCR-ABL mutation status (with or without the T315I mutation); Ph+ ALL patients were grouped with blast phase CML. The primary endpoints are major cytogenetic response rate for chronic phase patients and major hematologic response rate for accelerated and blast phase CML patients and Ph+ ALL patients. Secondary endpoints in the trial include major molecular response rate, duration of response, progression-free survival and overall survival. The trial was fully enrolled with approximately 450 patients entered over 13 months.

In December 2011, we announced preliminary clinical data from the pivotal PACE trial at the American Society of Hematology, or ASH, conference. The initial data demonstrated that 47 percent of chronic phase CML patients in the trial achieved a major cytogenetic response to date, including 65 percent of patients who had the T315I mutation. Approximately half of these patients had no more than a single bone-marrow assessment, while the remainder had two or more assessments. Initial safety data showed ponatinib to be well tolerated. We expect to conduct a complete analysis of the maturing PACE clinical trial data in preparation for our planned submission of a New Drug Application, or NDA, with the U.S. Food and Drug Administration, or FDA, and a Marketing Authorization Application, or MAA, with the European Medicines Agency, or EMA, in the third quarter of 2012.

In the first quarter of 2011, we entered into an agreement with MolecularMD Corporation, or MolecularMD, pursuant to which MolecularMD has agreed to develop and commercialize a companion diagnostic test to identify the T315I mutation of the BCR-ABL gene in patients with CML and Ph+ ALL. MolecularMD has agreed to further optimize its currently available sequencing test and to file a Premarket Approval application, or PMA, with the FDA to support commercialization of the diagnostic test as a companion diagnostic for use with ponatinib. Under the terms of the agreement, we are reimbursing MolecularMD for predefined expenses for the development of the diagnostic test. We will also pay MolecularMD for achievement of key development and regulatory milestones. We anticipate that the potential approval of the PMA will occur simultaneously with the potential approval of ponatinib.

The FDA has designated ponatinib as an orphan drug for the treatment of CML and Ph+ ALL, and the EMA has designated it as an orphan drug for CML and ALL.

*AP26113*

AP26113 is an investigational dual inhibitor of ALK and EGFR - two clinically validated targets in non-small cell lung cancer, or NSCLC. We submitted an investigational new drug application, or IND, for AP26113 in June 2011 and initiated patient enrollment and dosing in a Phase 1/2 clinical trial of AP26113 in the third quarter of 2011. The initial Phase 1 dose-escalation portion of the trial includes patients with advanced solid tumors, particularly those with NSCLC. Patients enrolled in this multicenter study are either refractory to available therapies or have no standard treatment available to them. The primary

objective of the Phase 1 portion of the trial is to determine the initial safety, tolerability, pharmacokinetic profile, recommended dose (anticipated to be once daily) and preliminary anti-tumor activity of AP26113. We expect to enroll approximately 30 to 50 patients in this portion of the trial. The Phase 2 portion of the trial is expected to begin in the second half of 2012 and will include four genetically defined patient cohorts, with three cohorts focused on lung cancer. The Phase 2 portion of the trial is planned to enroll approximately 80 additional patients and will provide further data on the preliminary anti-tumor activity of AP26113 in these molecularly defined patient populations. Depending on the timing of the completion of enrollment, the results of this trial and further discussions with regulatory authorities, we could conduct one or more potential pivotal trials of AP26113 in patients with non-small cell lung cancer commencing in 2013.

*Ridaforolimus*

Ridaforolimus is an internally discovered, potent mTOR inhibitor that we licensed to Merck in 2010 for oncology indications. mTOR acts as a central regulator of protein synthesis, cell proliferation, cell cycle progression and cell survival. Blocking mTOR creates a starvation-like effect in cancer cells by interfering with cell growth, division, metabolism and angiogenesis.

In September 2007, we initiated a Phase 3 clinical trial of ridaforolimus, which we named the SUCCEED trial, in patients with metastatic soft-tissue and bone sarcomas. SUCCEED (**S**arcoma **U**lti-**C**enter **C**linical **E**valuation of the **E**fficacy of **R**i**d**aforolimus) is a randomized, double-blind, placebo-controlled trial designed to assess the impact of oral ridaforolimus on progression-free survival, or PFS, the primary endpoint of the trial, and several secondary endpoints, in metastatic soft-tissue and bone sarcoma patients who benefited from prior chemotherapy.

We enrolled a total of 711 patients in the SUCCEED trial, and in January 2011 we announced top-line data showing that ridaforolimus met the primary endpoint of improved PFS compared to placebo. The complete study results from the SUCCEED trial were then presented at the Annual Meeting of the American Society of Clinical Oncology in June 2011. The most common side effects observed in the study were consistent with the known safety profile of ridaforolimus and included stomatitis (*e.g.*, mouth sores), fatigue, diarrhea and thrombocytopenia.

The trial remains active, and study participants continue to be followed to gather additional data on secondary endpoints, including overall survival and the safety profile of ridaforolimus. Merck filed for marketing approval of the oral formulation of ridaforolimus for patients with metastatic sarcomas in 2011, both in the United States and the European Union. The FDA and the EMA have designated ridaforolimus as an orphan drug for treatment of soft-tissue and bone sarcomas.

*Potential Cardiovascular Indications of Ridaforolimus*

As an mTOR inhibitor, ridaforolimus has also been shown in preclinical studies to block the proliferation and migration of vascular smooth muscle cells, the primary cause of narrowing and blockage of injured arteries, and is an analog of sirolimus, another mTOR inhibitor that has been approved for use in drug-eluting stents. Clinical studies have found lower reblockage rates in patients treated with stents that deliver small-molecule drugs, such as sirolimus, everolimus or paclitaxel, a cytotoxic agent, locally to the site of vascular injury. Such stents have become the standard of care for many patients undergoing interventional procedures to open narrowed coronary arteries.

We entered into license agreements with Medinol Ltd., or Medinol, a leading innovator in stent technology, in January 2005, and with ICON Medical Corp., or ICON, an emerging medical device company, in October 2007, to develop and commercialize stents and other medical devices to deliver ridaforolimus to prevent restenosis, or reblockage, of injured vessels following interventions in which stents are used in conjunction with balloon angioplasty. We have retained the right to enter into one additional non-exclusive license agreement, in addition to the licenses granted to Medinol and ICON, to

develop and commercialize medical devices delivering ridaforolimus for use in vascular disease. Both companies are still involved in the preclinical stages of development of these medical devices.

**Our Discovery Programs**

Our research and development programs are focused on discovering and developing small-molecule drugs that regulate cell signaling for the treatment of cancer. Many of the critical functions of cells, such as cell growth, differentiation, gene transcription, metabolism, motility and survival, are dependent on signals carried back and forth from the cell surface to the nucleus and within the cell through a system of molecular pathways. When disrupted or over-stimulated, such pathways may trigger diseases such as cancer. Our research focuses on exploring cell-signaling pathways, identifying their role in specific cancers and cancer subtypes, and discovering drug candidates to treat those cancers by interfering with the aberrant signaling pathways of cells. The specific cellular proteins blocked by our product candidates have been well characterized and validated as cancer targets. Product candidates like ponatinib, AP26113 and ridaforolimus have been developed in-house through the integrated use of structure-based drug design and computational chemistry, and their targets have been validated with techniques such as functional genomics, proteomics, and chemical genetics.

**Our Intellectual Property**

Patents and other intellectual property rights are essential to our business. In general, we file patent applications to protect our technology, inventions and improvements to our inventions that we consider to be patentable and important to our business.

We solely own the following patents and patent applications for our product candidates:

- Ponatinib, our pan BCR-ABL inhibitor, is protected by composition of matter claims of U.S. Patent No. 8,114,874, which expires on December 22, 2026, and corresponding international counterparts;
- AP26113, our dual ALK/EGFR kinase inhibitor, is covered by composition of matter claims of a pending U.S. patent application, which, if granted, is expected to expire in 2029, and corresponding international counterparts; and
- Ridaforolimus, our mTOR inhibitor licensed to Merck, is protected by composition of matter claims of U.S. Patent No. 7,091,213, which expires on February 3, 2023, and corresponding international counterparts.

In addition to the composition of matter patents and patent applications mentioned above, we also own other patents and patent applications covering manufacturing processes, formulations and uses that may provide additional protection of the respective product candidate.

The remainder of our patent portfolio is focused primarily on inventions involving additional classes of chemical compounds, the mTOR gene, and the components, configurations and use of our ARGENT regulation technologies, which we out-licensed in 2011 and are no longer pursuing internally.

We also rely on unpatented trade secrets and proprietary know-how, some of which is not believed to be adequately protectable through patents. In order to protect our trade secrets, we enter into confidentiality agreements with our employees, consultants, investigators, clinical trial sites, contractors, collaborators and other third parties to whom we disclose confidential information, although protection of trade secrets is generally recognized as challenging.

**Our Licenses to Third Parties**

*Our Collaboration and License Agreements with Merck*

In July 2007, we entered into a collaboration agreement with Merck for the joint global development, manufacture and commercialization of ridaforolimus for use in cancer, referred to as the Collaboration Agreement. In May 2010, we entered into an amended and restated agreement with Merck, referred to as the License Agreement, which replaced the Collaboration Agreement, and a related supply agreement.

Under the terms of the License Agreement, we granted Merck an exclusive license to develop, manufacture and commercialize ridaforolimus in oncology, and Merck assumed responsibility for all activities related to the development, manufacture and commercialization of ridaforolimus and will continue to fund 100 percent of all ridaforolimus costs incurred after January 1, 2010. The License Agreement provides that all ridaforolimus activities that had been our responsibility under the Collaboration Agreement would be transitioned to Merck, a process that was completed in the fourth quarter of 2010. The License Agreement provides that Merck will develop ridaforolimus in multiple oncology indications. If ridaforolimus receives regulatory approval, Merck will be responsible for selling ridaforolimus worldwide, will record global sales and will pay us tiered double-digit royalties on global net sales. The License Agreement provides us with an option to co-promote ridaforolimus in all indications in the United States and, in such case, we would be compensated by Merck for our sales efforts. We have elected to exercise our option to co-promote ridaforolimus for the sarcoma indication, subject to the terms of a co-promotion agreement now being negotiated by us and Merck.

Under the License Agreement, Merck paid us an initial up-front fee of $50 million in the second quarter of 2010 and has agreed to pay us up to $514 million in potential regulatory and sales milestone payments, based on the successful development of ridaforolimus in multiple potential cancer indications or upon achievement of specified product sales thresholds. Through December 31, 2011, Merck has paid us a $25 million milestone payment in the third quarter of 2011, for acceptance of the MAA in Europe for the sarcoma indication. Potential additional milestone payments include up to $40 million associated with potential regulatory approvals for the sarcoma indication (consisting of $25 million for marketing approval in the United States, $10 million for approval to sell ridaforolimus in the European Union, including first pricing and reimbursement approval granted by a regulatory authority in any major European country or by the EMA, and $5 million for marketing approval of ridaforolimus in Japan), up to $249 million associated with potential regulatory filings and approvals for other cancer indications, and up to $200 million associated with the achievement of certain sales thresholds.

The term of the License Agreement extends until the expiration of all obligations of Merck to pay royalties or milestones to us with respect to its development and commercialization of a product. There is no specified term for Merck's obligation to pay milestones under the License Agreement, and the term of Merck's obligation to pay royalties extends until the later of the last to expire claim under the patents relating to the licensed rights or a specified number of years after the first commercial sale of a product. The License Agreement may be terminated by either party for material breach following the failure to cure after a 60-day cure period (which period is reduced to 30 days if the breach is due to the failure to make a required payment) or for insolvency or bankruptcy which is not discharged within 60 days of the filing. Merck may terminate the License Agreement on nine months' written notice to us or as a result of a serious safety issue after meeting with us as specified in the agreement. We may terminate the License Agreement immediately upon written notice to Merck in the event that Merck or any of its affiliates challenge any ARIAD patent right or assist a third party in such challenge. We also have the right to terminate the License Agreement in specified circumstances with respect to specific indications if Merck pursues a competing mTOR inhibitor prior to receiving regulatory approval of ridaforolimus.

*Our Stent Collaborations*

In January 2005, we entered into a license agreement with Medinol, a cardiovascular medical device company, to develop and commercialize ridaforolimus-eluting stents and other medical devices to prevent restenosis, or reblockage, of injured vessels following interventions in which stents are used in conjunction with balloon angioplasty. Under the agreement, we granted to Medinol a non-exclusive, world-wide, royalty-bearing license, under our patents and technology relating to ridaforolimus, to develop, manufacture and sell the stents and certain other medical devices that deliver ridaforolimus. We are responsible for supplying Medinol with, and Medinol agreed to purchase from us, certain quantities of ridaforolimus for use in its development, manufacture and sale of the stents and other medical devices.

The agreement provides for the payment by Medinol to us of up to $39.3 million, which includes an upfront license fee and payments based upon achievement of development, regulatory and commercial milestones, if two products are developed. Through December 31, 2011, we have received $750,000 under the agreement. In addition, we are eligible to receive tiered single-digit royalties based on various minimum levels of stents or other medical devices sold under the agreement. As of December 31, 2011, no products have been approved by regulatory authorities for sale under this agreement.

In October 2007, we entered into a license agreement with ICON, a cardiovascular medical device company, to develop and commercialize ridaforolimus-eluting stents and other medical devices to prevent restenosis, or reblockage, of injured vessels following interventions in which stents are used in conjunction with balloon angioplasty. Under the agreement, we granted to ICON a non-exclusive, worldwide, royalty-bearing license, under our patents and technology relating to ridaforolimus, to develop, manufacture and sell the stents and certain other medical devices that deliver ridaforolimus. We are responsible for supplying ICON with, and ICON agreed to purchase from us, certain quantities of ridaforolimus for use in its development, manufacture and sale of the stents and other medical devices.

Concurrent with the execution of the agreement, we received shares of ICON common stock equal to an ownership interest in ICON of less than 10 percent and certain other rights including, maintenance, anti-dilution and registration rights. The agreement provides for the payment by ICON to us of up to $27.4 million based upon achievement of certain clinical, regulatory and commercial milestones, if two products are developed. Through December 31, 2011, we have received no such payments under the agreement. In addition, we are eligible to receive single-digit royalties based on net sales of stents or other medical devices sold under the agreement. As of December 31, 2011, no products have been approved by regulatory authorities for sale under this agreement.

The terms of both the Medinol and ICON agreements extend to the later to occur of the expiration of our patents relating to the rights licensed to Medinol or ICON under the agreement or 15 years after the first commercial sale of a product. The agreements may be terminated by either party for breach following the failure to cure after a 90-day cure period. In addition, Medinol or ICON may terminate their respective agreements upon 30 days' notice to us upon certain events, including if it determines, in its reasonable business judgment, that it is no longer in its business interest to continue the development of a medical device to deliver ridaforolimus. We may terminate the agreements upon 30 days' notice to Medinol or ICON, if we determine that it is no longer in our business interest to continue our development and regulatory approval efforts with respect to ridaforolimus.

*Licenses Related to ARGENT Technology*

In the first half of 2011, we executed three exclusive out-license agreements for separate aspects of our ARGENT cell-signaling regulation technology, which we are no longer pursuing internally. The licenses to these non-core assets provide us with a combination of equity ownership in the licensees, upfront payments, ongoing fees for supply of certain research reagents, and potential milestone and royalty payments linked to clinical, regulatory and sales achievements of the licensees. These out-

license arrangements allow us to focus primarily on the development and commercialization of our core compounds, and we do not currently believe that these license agreements are material to our business.

The ARGENT technology platform combines chemistry and genetics to allow specific cell-signaling and gene-expression events to be chemically activated in whole animals and cultured cells. The technology platform includes a portfolio of distinct small-molecule "dimerizer" compounds optimized for specific applications. Dimerizers bring specific proteins together in cells. The technology allows intracellular processes to be controlled with small molecules, which may be useful in the development of therapeutic vaccines and gene and cell therapy products, and which provide versatile tools for applications in cell biology, functional genomics and drug-discovery research. The technology is being developed to treat human disease through cancer vaccines, cell therapy and gene therapy, in each case featuring small-molecule regulation of cellular activation.

Initial clinical proof of concept has already been demonstrated by the licensees for two product candidates, which utilize our small-molecule dimerizer drug AP1903, in patients with prostate cancer and in patients with hematologic malignancies who have undergone hematopoietic stem cell transplants. We expect the licensees to start Phase 2 clinical trials of both product candidates in 2012. AP1903 was discovered and developed by ARIAD scientists.

**Research and Development Spending**

During each of the three years ended December 31, 2011, 2010, and 2009, we spent approximately $77.7 million, $58.0 million and $63.4 million, respectively, on our research and development activities.

**Manufacturing**

Our drug candidates and preclinical compounds are small molecules that can be readily synthesized by processes that we have developed. We are able to manufacture in-house the quantities of our product candidates necessary for certain preclinical studies. We do not own or operate manufacturing facilities for the production of clinical or commercial quantities of our product candidates. We contract with third-party manufacturers to assist in the development and optimization of our manufacturing processes and methods and to supply our product candidates in sufficient bulk quantities and in suitable dosage forms for use in our clinical trials. We also expect to depend on third-party manufacturers for the supply of our products upon commercialization.

Ponatinib and AP26113 are produced by an established manufacturing process using conventional organic chemical synthesis. The production of ponatinib and AP26113 is based on technology that we believe is proprietary to us. We anticipate entering into long-term supply agreements with a contract manufacturer for the manufacture of ponatinib in 2012.

Ridaforolimus is produced by an established manufacturing process using conventional synthetic and natural-product fermentation techniques. The production of ridaforolimus is based in part on technology that we believe is proprietary to us. Pursuant to our License Agreement with Merck, Merck is responsible for supplying the active pharmaceutical ingredient used in ridaforolimus drug product and the finished drug product. Merck may sub-license this technology to contract manufacturers to enable them to manufacture ridaforolimus for Merck's and our use, including use by our medical-device collaborators.

Contract manufacturers are subject to extensive governmental regulation and we depend on them to manufacture our product candidates in accordance with the FDA's current good manufacturing practice regulations, or cGMPs. We have an established quality assurance program intended to ensure that our contract manufacturers produce our compounds in accordance with cGMPs, and other applicable domestic and foreign regulations. We believe that our current contractors comply with such regulations.

**Competition**

The pharmaceutical and biotechnology industries are intensely competitive. We compete directly and indirectly with other pharmaceutical companies, biotechnology companies and academic and research organizations, many of whom have greater resources than us. We compete with companies who have products on the market or in development in the same class or for the same indications as our product candidates. We may also complete with organizations that are developing similar technology platforms.

In the area of oncology, pharmaceutical and biotechnology companies such as Amgen Inc., AstraZeneca PLC, Bristol-Myers Squibb Company, Eli Lilly and Company, the Roche Group, GlaxoSmithKline plc, Johnson & Johnson, Merck, Merck KGaA, Novartis AG, Sanofi-Aventis, Takeda Pharmaceutical Co., Ltd., Celgene Corporation and Pfizer, Inc., are developing and marketing drugs to treat cancer.

Bristol-Myers Squibb and Novartis are currently marketing BCR-ABL inhibitors for the treatment of patients with CML that could compete with ponatinib. Novartis' imatinib is marketed in the first-line setting, and Bristol-Myers Squibb's dasatinib and Novartis' nilotinib are marketed for patients in the first-line setting, as well as in those who have failed imatinib therapy. In Asia, Il-Yang Pharmaceutical recently gained approval in Korea for a locally developed BCR-ABL inhibitor for the treatment of CML patients. Other companies, including Pfizer and Teva Pharmaceuticals, have therapies in late stages of drug development for the treatment of CML.

Several companies have ALK inhibitors in various stages of development that could compete with AP26113. Pfizer has obtained approval for and is currently marketing crizotinib for patients with ALK-positive non-small cell lung cancer. Novartis, Chugai Pharmaceutical Co., Tesaro, Xcovery and Astellas also have ALK inhibitors in early-stage development. In addition, a number of companies have developed, or are in various stages of development of second-generation EGFR inhibitors, including Roche/Astellas, Pfizer, Boehringer Ingleheim, Celgene/Avila Therapeutics and Clovis Oncology.

Pfizer and Novartis are developing mTOR inhibitors for use in cancer that could compete with ridaforolimus. Pfizer's mTOR inhibitor, temsirolimus, and Novartis' mTOR inhibitor, everolimus, are both approved to treat patients with advanced kidney cancer. In addition, everolimus has been approved to treat patients with advanced neuroendocrine tumors of pancreatic origin and subependymal giant cell astrocytoma associated with tuberous sclerosis. Other companies have products on the market or in development against which ridaforolimus, if approved, may compete. Specifically, PharmaMar, a wholly owned subsidiary of Zeltia Group, has a product, trabectedin, approved for the treatment of soft-tissue sarcomas in Europe, and Takeda has mifamurtide, an immunotherapy product approved in Europe for treatment of bone sarcomas. Ziopharm Oncology, Inc. has palifosfamide, a chemotherapeutic agent, used in combination with doxorubicin in Phase 3 development for first-line treatment of metastatic sarcomas.

We may also experience competition from companies that have acquired or may acquire technology from companies, universities, and other research institutions. As these companies develop their technologies, they may develop proprietary positions that may materially and adversely affect us.

**Government Regulation**

*The following section contains a summary of the regulatory approval process for our product candidates and other government regulations that have or are likely to have a material impact on our business. The regulatory environment in which we and other healthcare companies operate is complex and constantly changing.*

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing and export and import of products such as those we are developing. The process of obtaining regulatory approvals in the United States and in foreign countries, along with subsequent compliance

with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

*United States Drug Development Process*

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and implementing regulations. Our product candidates must be approved by the FDA through the NDA process before they may be legally marketed in the United States, which generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies according to Good Laboratory Practices or other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to Good Clinical Practices and other applicable requirements to establish the safety and efficacy of the proposed drug for its intended use;
- submission to the FDA of an NDA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with cGMP to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity; and
- FDA review and approval of the NDA.

As part of the IND, an IND sponsor must submit to the FDA the results of preclinical tests, which may include laboratory evaluations and animal studies, together with manufacturing information and analytical data, and the proposed clinical protocol for the first phase of the clinical trial of the drug. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the clinical trial on a "clinical hold" because of safety concerns or perceived procedural deficiencies. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials may begin. A clinical hold may be imposed by the FDA at any time during the life of an IND, and may affect one or more specific studies or all studies conducted under the IND.

All clinical trials must be conducted under the supervision of a qualified investigator in accordance with good clinical practice regulations. An institutional review board, or IRB, must also review and approve each new clinical protocol and patient informed consent form prior to commencement of the corresponding clinical trial at each institution where a trial is to be performed. Protocols detail, among other things, the objectives of the study, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor patient safety.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1:* The drug is introduced into healthy human subjects or patients (in the case of certain inherently toxic products for severe or life-threatening diseases) and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion.
- *Phase 2:* Involves studies in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage.

- *Phase 3:* Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical study sites. These studies are intended to establish the overall risk-benefit ratio of the product and provide, if appropriate, an adequate basis for product labeling.

During the development of a new drug, sponsors are given an opportunity to meet with the FDA at certain points. These meetings occur prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and FDA to reach agreement on the next phase of development. Sponsors typically use the end-of-Phase 2 meeting to discuss their Phase 2 clinical results and present their plans for the pivotal Phase 3 clinical trial that they believe will support approval of the new drug.

If a Phase 2 clinical trial is the subject of discussion at an end-of-Phase 2 meeting with the FDA, a sponsor may be able to request a Special Protocol Assessment, or SPA, the purpose of which is to reach agreement with the FDA on the design of the Phase 3 clinical trial protocol design and analysis that will form the primary basis of an efficacy claim. If such an agreement is reached, it will be documented and made part of the administrative record, and it will be binding on the FDA and may not be changed unless the sponsor fails to follow the agreed-upon protocol, data supporting the request are found to be false or incomplete, or the FDA determines that a substantial scientific issue essential to determining the safety or effectiveness of the drug was identified after the testing began. Even if a SPA is agreed to, approval of the NDA is not guaranteed since a final determination that an agreed-upon protocol satisfies a specific objective, such as the demonstration of efficacy, or supports an approval decision, will be based on a complete review of all the data in the NDA.

If a drug is intended to treat a serious or life threatening condition for which there is an unmet medical need, a company may request that the FDA consider the drug for a fast track development program at the time of submitting its IND or at any time prior to receiving marketing approval. The fast track program is designed to facilitate the development and expedite the review of a new drug for the treatment of specific conditions. If the FDA agrees that the drug meets the criteria for fast track development for treatment of one or more conditions, it will grant fast track status.

***Orphan Drug Designation***

Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug intended to treat a rare disease or condition which is defined as one affecting fewer than 200,000 individuals in the United States or more than 200,000 individuals where there is no reasonable expectation that the product development cost will be recovered from product sales in the United States. Orphan drug designation must be requested before submitting an NDA and does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

If an orphan drug-designated product subsequently receives the first FDA approval for the disease for which it was designed, the product will be entitled to seven years of product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication, except in very limited circumstances, for seven years. If a competitor obtains approval of the same drug, as defined by the FDA, or if our product candidate is determined to be contained within the competitor's product for the same indication or disease, the competitor's exclusivity could block the approval of our product candidate in the designated orphan indication for seven years.

*United States Review and Approval Processes*

The results of product development, preclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling, and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product.

The FDA reviews all NDAs submitted to ensure that they are sufficiently complete for substantive review before it accepts them for filing. Once the submission is accepted for filing, the FDA begins an in-depth and substantive review. The FDA may seek advice and a recommendation from an external advisory committee as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendation of an advisory committee. The FDA may refuse to approve an NDA if the applicable regulatory criteria are not satisfied or may require submission of additional clinical or other data and information which, upon agency review and interpretation, may or may not be deemed by the FDA to satisfy the criteria for approval. The FDA may also issue a "complete response" letter, which may require additional clinical or other data or impose other conditions that must be met in order to secure final approval of the NDA.

NDAs receive either standard or priority review. A drug representing a significant improvement in treatment, prevention or diagnosis of disease may receive priority review. In addition, products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may receive accelerated approval and may be approved on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. In such a situation, a drug may be approved based on a Phase 2 pivotal trial. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. Priority review and accelerated approval do not change the standards for approval, but may expedite the approval process.

If approved by the FDA, the product's use may be limited to specific diseases, dosages or indications. In addition, the FDA may require us to conduct additional testing post- approval, which may involve further nonclinical studies or clinical trials designed to further assess the drug's safety and effectiveness and may require additional testing and surveillance programs to monitor the safety of the drug in the marketplace.

*Regulation of Combination Products*

A product comprised of two or more regulated components, such as a drug/device, biologic/device, drug/biologic, or drug/device/biologic, that is physically, chemically, or otherwise combined or mixed and produced as a single entity is considered a combination product and may require more than one product approval. Drug-eluting stents such as the product candidates being developed by Medinol and ICON are regulated by the FDA as combination products. Primary responsibility for the premarket review and regulation of these types of stents was assigned by FDA's Office of Combination Products to the Center of Devices and Radiological Health after it concluded that the primary mode of action, or the single mode of action that provides the most important therapeutic action, is the medical device component. Nevertheless, the FDA has applied human drug cGMP to the manufacture of the drug component of the combination product and may apply other drug requirements to a product as appropriate.

*Approval or Clearance of Medical Devices*

The basic regulatory requirements that manufacturers of medical devices distributed in the U.S. must comply with are:

- 510(k) premarket notification, unless exempt, or premarket approval application, or PMA
- Establishment registration
- Medical device listing
- Quality system regulation
- Labeling requirements
- Medical Device Reporting

The FDA classifies medical devices into one of three classes based on the perceived level of associated risk. Regulatory control and related requirements increase from Class I to Class III. Before most new devices can be introduced, their manufacturers must obtain marketing clearance through either a premarket notification under Section 510(k) of the FDCA or approval of a PMA.

Drug-eluting stents are classified as Class III devices and must be the subject of an approved PMA before they may be marketed. A PMA must be supported by more detailed scientific evidence including clinical data to demonstrate the safety and efficacy of the device. If the device is determined to present a significant risk, the manufacturer must submit an investigational device exemption, or IDE, prior to commencing clinical trials. If the FDA approves the IDE and the institutional review boards, or IRBs, at the institution at which the clinical trials will be performed approve the clinical protocol and related materials, clinical trials may begin. Upon completion of the clinical trials, and assuming that the results indicate that the product is safe and effective for its intended purpose, the sponsor will then submit a PMA.

PMA approval requires, among other things, the submission of valid scientific evidence in the form of preclinical and clinical data, and a preapproval inspection to determine if the manufacturing facility complies with quality systems/current good manufacturing practices, or QS/GMP, under the regulation that governs the design and all elements of the manufacture, control, documentation of devices.

*Regulation of Companion Diagnostic Devices*

Diagnostic tests may be used in the determination of whether a drug should be prescribed for a patient and are often referred to as in vitro companion diagnostic devices. The FDA regulates in vitro diagnostic tests as medical devices. Most tests that are intended to be performed by any appropriately licensed clinical laboratory are classified as Class II devices and must be subject to a cleared 510(k) before they can be sold. Other clinical laboratory tests, known as laboratory developed tests, or LDTs, that are developed, validated and performed only at a laboratory that is certified as a high complexity laboratory under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, have generally avoided FDA regulation. Nevertheless, the FDA has consistently stated that it has the authority to regulate LDTs as medical devices, but has exercised enforcement discretion in not otherwise regulating most LDTs as long as the test was developed and validated at the high complexity CLIA-certified laboratory at which the test is performed. Recently, the FDA indicated that it is reviewing the regulatory requirements that will apply to LDTs, and held a two day public meeting in July 2010, to obtain input from stakeholders on how it should apply its authority to implement a reasonable risk-based and effective regulatory framework for LDTs. The FDA missed its 2011 target for issuance of an overarching guidance, but expects that it will be issued in early 2012.

In July 2011, the FDA issued a Draft Guidance for Industry and Food and Drug Administrative Staff on In Vitro Companion Diagnostic Devices. The Draft Guidance applies to in vitro companion diagnostic devices that provide information that is essential for the safe and effective use of a corresponding therapeutic drug. However, a novel in vitro diagnostic test that provides information that is useful in,

but not a determining factor for, the safe and effective use of a therapeutic product would not be considered an in vitro companion diagnostic device subject to the Draft Guidance.

*Post-Approval Requirements*

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. Manufacturers and other entities involved in the manufacture and distribution of approved FDA-regulated products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products. Future FDA and state inspections may identify compliance issues at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct.

Any drug products manufactured or distributed by us or our collaborators pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the drug, providing the FDA with updated safety and efficacy information, drug sampling and distribution requirements, and complying with FDA promotion and advertising requirements. The FDA strictly regulates labeling, advertising, promotion and other types of information on products that are placed on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label.

*Foreign Regulation*

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

As in the United States, the EMA may grant orphan drug status for specific indications if the request is made before an MAA is made. The EMA considers an orphan medicinal product to be one that affects less than five of every 10,000 people in the European Union. A company whose application for orphan drug designation in the European Union is approved is eligible to receive, among other benefits, regulatory assistance in preparing the marketing application, protocol assistance and reduced application fees. Orphan drugs in the European Union also enjoy economic and marketing benefits, including up to ten years of market exclusivity for the approved indication, unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan designated product.

*Reimbursement*

Sales of any of our product candidates, if approved, will depend, in part, on the extent to which the costs of the products will be covered by third-party payors, such as government health programs such as Medicare and Medicaid, commercial health insurers and managed care organizations. These third-party payors are increasingly challenging the prices charged for medical products and services. Additionally, the containment of healthcare costs has become a priority of federal and state governments, and the prices of drugs have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including

price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our net revenue and results. If these third-party payors do not consider our products to be cost-effective compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, imposes requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities which will provide coverage of outpatient prescription drugs. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan will likely be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

On February 17, 2009, President Obama signed into law the American Recovery and Reinvestment Act of 2009. This law provides funding for the federal government to compare the effectiveness of different treatments for the same illness. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payors, it is not clear how such a result could be avoided and what if any effect the research will have on the sales of our product candidates, if any such product or the condition that it is intended to treat is the subject of a study.

The Patient Protection and Affordable Care Act and the Health Care and Education Affordability Reconciliation Act of 2010 (collectively, the Affordable Care Act or ACA) enacted in March 2010, are expected to have a significant impact on the health care industry. ACA is expected to expand coverage for the uninsured while at the same time contain overall healthcare costs. With regard to pharmaceutical products, among other things, ACA is expected to expand and increase industry rebates for drugs covered under Medicaid programs and make changes to the coverage requirements under the Medicare D program. We cannot predict the impact of ACA on pharmaceutical companies as many of the ACA reforms require the promulgation of detailed regulations implementing the statutory provisions which has not yet occurred. In addition, the current legal challenges to ACA, as well as congressional efforts to repeal ACA, add to the uncertainty of the legislative changes enacted as part of ACA.

We expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls and limit the growth of healthcare costs, including the cost of prescription drugs. At the present time, Medicare is prohibited from negotiating directly with pharmaceutical companies for drugs. However, Congress is currently considering passing legislation that would lift the ban on federal negotiations. In addition, Congress has been considering much broader regulation of healthcare and the House and Senate have passed different versions of bills for healthcare reform. While we cannot predict whether those bills will be reconciled or whether another version of healthcare reform legislation will be enacted into law, passage of such a law or the adoption of other legislative or regulatory proposals could have a material adverse effect on our business, financial condition and profitability.

In addition, 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. For example, the European Union provides options for its member states to restrict the range of medicinal

products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products.

**Our Employees**

As of February 15, 2012, we had approximately 150 employees, of whom more than half held post-graduate professional, medical or science degrees. Most of our employees are engaged directly in research and development and we are now building a commercial organization to prepare for commercial launch of one or more products. We have entered into confidentiality, assignment of inventions and non-disclosure agreements with all of our employees and non-competition agreements with all of our senior level employees. None of our employees are covered by a collective bargaining agreement, and we consider relations with our employees to be good.

**Our Company**

ARIAD was organized as a Delaware corporation in April 1991. Our principal executive offices are located at 26 Landsdowne Street, Cambridge, Massachusetts 02139-4234, and our telephone number is (617) 494-0400. We maintain an internet website at http://www.ariad.com, the contents of which are not incorporated herein. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and all amendments to such reports are made available free of charge through www.sec.gov and the Investor Relations section of our website as soon as reasonably practicable after they have been electronically filed with or furnished to the United States Securities and Exchange Commission, or SEC.

ARIAD and the ARIAD logo are our registered trademarks. ARGENT is our trademark. Other service marks, trademarks and trade names appearing in this report are the property of their respective owners.

## ITEM 1A: RISK FACTORS

***THE RISKS AND UNCERTAINTIES DESCRIBED BELOW ARE THOSE THAT WE CURRENTLY BELIEVE MAY MATERIALLY AFFECT OUR COMPANY. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCUR, THEY MAY MATERIALLY HARM OUR BUSINESS, OUR FINANCIAL CONDITION AND OUR RESULTS OF OPERATIONS.***

### Risks Relating to the Discovery, Development and Commercialization of Our Product Candidates

***We depend heavily on the success in the United States of our lead product candidate, ponatinib, which is in a pivotal Phase 2 clinical trial and has not yet been approved by the FDA. If we experience material delays in filing for and obtaining marketing approval for ponatinib, or we are unable to obtain such approval at all, our business will be materially harmed.***

We believe that a significant portion of the value attributed to our company by investors is based on the commercial potential of ponatinib, which is currently in a pivotal Phase 2 clinical trial. Subject to further patient follow-up and data analysis in this trial, we expect to file for marketing approval of ponatinib in the United States in the third quarter of 2012 and could receive approval as soon as the first quarter of 2013. The FDA has substantial discretion in deciding whether or not ponatinib should be granted approval based on the benefits and risks of ponatinib in the treatment of patients with resistant or intolerant CML and Ph+ ALL.

Our ability to file for and obtain approval to market ponatinib in a timely manner will depend on many factors, including the following:

- whether or not the final data from the Phase 2 clinical trial of ponatinib is consistent with the preliminary data we reported at the ASH conference in December 2011 and is sufficient to support our filing of an NDA with the FDA;
- if we file an NDA, whether or not the FDA determines that the evidence gathered in well-controlled clinical trials, other clinical trials and nonclinical studies of ponatinib demonstrates that ponatinib is safe and effective as a treatment for patients with resistant or intolerant CML and Ph+ ALL;
- if we file an NDA, whether or not the FDA is satisfied that the manufacturing facilities, processes and controls for ponatinib are adequate, that the labeling is satisfactory and that plans for post-marketing studies, safety monitoring and risk evaluation and mitigation are sufficient; and
- if we file an NDA, the timing and nature of the FDA's comments and questions regarding the NDA for ponatinib, the scheduling and recommendations of any advisory committee meeting to consider ponatinib, the time required to respond to the FDA's comments and questions and to obtain the final labeling for ponatinib and any other delays that may be associated with the NDA review process.

If we experience material delays in filing for and obtaining marketing approval for ponatinib in the United States, we will not receive product revenues during the delay. Any such delay may materially harm our ability to earn product revenues and generate cash flows. If we do not obtain approval to market ponatinib in the United States, our business will be materially harmed.

***We have no product candidates that have been approved by the FDA or any foreign regulatory authority, and we and our collaborators may never succeed in obtaining regulatory approval for any products, developing marketable products or generating product revenues.***

We do not currently have any products on the market and have no product revenues. All of our products are in various stages of clinical development by us or our collaboration partners. Our success is substantially dependent on (1) our ability to successfully complete clinical development and obtain

marketing approval for ponatinib, AP26113 and our other product candidates, (2) the ability of Merck to obtain marketing approval for ridaforolimus for metastatic sarcoma and other cancer indications, and (3) the ability of our collaborators, Medinol and ICON, to obtain marketing approval for stents or other medical devices delivering ridaforolimus.

As with all scientific endeavors, we face much trial and error, and we and our collaborators may fail at numerous stages along the way, which would inhibit us and our collaborators from successfully developing, obtaining approval for and marketing our drug candidates. Factors which could affect the timing and the ability to obtain regulatory approval and to achieve market acceptance and gain market share for ponatinib, AP26113, ridaforolimus and any other product candidate include, among other factors, product formulation, dose, dosage regimen, the ability to obtain timely and sufficient patient enrollment in clinical trials, the risk of occurrence of adverse side effects in patients participating in clinical trials, the receipt of clinical data that is sufficient to support regulatory approval, the ability to manufacture, directly or indirectly, sufficient quantities of product candidates at commercially reasonable costs, the ability to fund commercial development and to build or access a sales force in the marketplace, the ability to successfully differentiate product candidates from competitive product(s), the ability to educate physicians and build awareness about our product candidates, and the ability to sell, market and distribute, directly or indirectly, such product candidates.

Subject to receipt of marketing approval, we do not expect Merck to commence sales of ridaforolimus before the middle of 2012 or for us to commence sales of ponatinib before the beginning of 2013, at the earliest. We and Merck may not receive regulatory approvals within these timeframes, or at all, and ultimately we and our collaborators may not succeed in developing or commercializing any products which will generate revenues for our company. If we and our collaborators are not successful in developing or marketing our product candidates, we will not be profitable.

***Positive results from earlier stage preclinical or clinical trials may not be replicated in later-stage clinical trials, or regulatory authorities may conclude that clinical data from later-stage clinical trials is not sufficient to support approval.***

A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in earlier-stage development. Accordingly, the results to date from preclinical studies and clinical trials for ponatinib, AP26113 and ridaforolimus may not be predictive of the results to be obtained from ongoing or future clinical trials. In addition, regulatory authorities may conclude that data generated from later-stage clinical trials are not sufficient to support approval. For example, based on clinical data obtained to date, we believe that we will be able to file and obtain regulatory approval for ponatinib on the basis of data from our pivotal Phase 2 PACE trial, and we believe that a similar regulatory approval pathway could exist for AP26113. If positive results from earlier stage trials are not replicated in later-stage trials, or we or our collaborators are required to conduct additional clinical trials or other testing of our product candidates beyond those currently contemplated, we or our collaborators may be delayed in obtaining, or may not be able to obtain, marketing approval for these product candidates, and we may lose the opportunity to generate product revenues or to earn additional development or regulatory milestones or royalties. Furthermore, potential competitive commercial factors may influence future decisions and directions by us or our collaborators on which clinical indications to pursue and when.

***We may need to develop a diagnostic test in order to allow us to market ponatinib to a specific patient population.***

We are conducting a pivotal Phase 2 clinical trial of ponatinib in patients with resistant or intolerant CML and Ph+ ALL. Patients who are resistant or intolerant to certain other currently marketed drugs or those who have the T315I mutation have been enrolled in this trial. In order to be able to obtain regulatory approval to market ponatinib specifically with an indication for patients with the T315I mutation, the FDA may require that there be an FDA-approved diagnostic test that identifies patients who have this

T315I mutation. Such an approved diagnostic test does not currently exist, and we are collaborating with MolecularMD for the development and commercialization of such a companion diagnostic test. If MolecularMD is unsuccessful in its efforts to develop and gain regulatory approval for such a test, we may not be able to market ponatinib specifically for patients who have the T315I mutation, and our business, results of operations and financial position could be materially harmed.

***Competing technologies may render some or all of our programs or future products noncompetitive or obsolete.***

Many well-known pharmaceutical, healthcare and biotechnology companies, academic and research institutions and government agencies, which have substantially greater capital, research and development capabilities and experience than us or our potential collaborators, are presently engaged in one or more of the following activities:

- developing products based on cell signaling, cancer biology, and computational chemistry;
- conducting research and development programs for the treatment of the various potential disease indications in which we are focused; and
- manufacturing, marketing and selling pharmaceutical or medical device products for treatment of diseases in all of the various disease indications in which we or our current or possible future collaborators are focused.

For additional information, see the disclosure in this Annual Report under the caption "Business - Competition." Some of these entities already have competitive products on the market or product candidates in clinical trials or in more advanced preclinical studies than we do. Many of these entities also have substantially greater research, development, manufacturing and marketing resources and experience than us. Competing technologies may render some or all of our programs or future products noncompetitive or obsolete, and we may not be able to make the enhancements to our technology necessary to compete successfully with newly emerging technologies. Competing products on the market or in development may also lead us and our collaborators to revise or cease development of our product candidates in one or more indications for commercial reasons, even where clinical data may be promising. If we are unable to successfully compete in our chosen markets, we will not become profitable.

***If we are unable to establish sales, marketing and distribution capabilities or to enter into agreements with third parties to do so, we may be unable to successfully market and sell any products, even if we are able to obtain regulatory approval.***

We have no experience in marketing or selling any products or in setting pricing and obtaining adequate third-party reimbursement for drugs. In order to market our product candidates, if they are approved, we will need to build a marketing organization and a specialized sales force, which requires substantial efforts and significant management and financial resources. We have commenced preparations for the potential commercial launch of ponatinib in the United States and Europe, including efforts to expand our marketing and sales teams. In addition, we are in the process of establishing a European headquarters in Switzerland to lead our commercial operations in Europe, in anticipation of the potential approval of the marketing authorization application for ponatinib. In order to support an effective launch of any product, we will need to make significant financial commitments and devote significant effort, in particular, to recruiting individuals with experience in the sales and marketing of pharmaceutical products. Competition for personnel with these skills is very high and may be particularly difficult for us while our present candidates are yet to be approved and we will be competing with companies that are currently marketing approved, successful drugs. Accordingly, we may be unable to successfully sell any product candidates that we obtain marketing approval to sell. If we are unable to effectively sell our products, our ability to generate revenues will be materially adversely

affected. We may not be able to hire, in a timely manner, the qualified sales and marketing personnel we need, if at all. In addition, we may not be able to enter into any marketing or distribution agreements on acceptable terms, if at all. If we cannot establish sales, marketing and distribution capabilities as we intend, either by developing our own capabilities or entering into agreements with third parties, sales of future products, if any, may be harmed.

***If our product candidates are not accepted by patients, physicians and insurers, we will not be successful.***

Our success is dependent on the acceptance of any approved products. Our product candidates may not achieve market acceptance among patients, physicians or third-party payors, even if we obtain necessary regulatory and reimbursement approvals. Physicians and health care payors may conclude that our product candidates are not as safe and/or effective as competing therapies or are not as attractive based on a cost/benefit analysis as alternative treatments. For example, physicians may elect not to prescribe our drugs, and patients may elect not to request or take them, for a variety of reasons, including lower demonstrated clinical safety and efficacy compared to other drugs; prevalence and severity of adverse side effects; lack of cost-effectiveness; lack of reimbursement availability from third-party payors; a decision to wait for the approval of other therapies that have significant perceived advantages over our drug candidates; convenience and ease of administration; other potential advantages of alternative treatment methods; or ineffective marketing and distribution support. Failure to achieve significant market acceptance of our product candidates or to be paid and adequate amount for our product candidates will harm our business. We believe that recommendations by physicians and health care payors will be essential for market acceptance of any product candidates. If our product candidates are approved and fail to achieve market acceptance, we will not be able to generate significant revenues.

***If we develop a product for commercial use, a subsequent product liability-related claim or recall could have an adverse effect on our business.***

Our business exposes us to potential product liability risks inherent in the testing, manufacturing and marketing of pharmaceutical products. Prior to obtaining regulatory approval to market our products, we or our collaborators are required to test such products in human clinical trials at health care institutions pursuant to agreements which indemnify such institutions in case of harm caused to patients by our products. We may not be able to avoid significant product liability exposure resulting from use of our products. A product liability-related claim or recall could be detrimental to our business. In addition, except for insurance covering product use in our clinical trials, we do not currently have any product liability insurance, and we may not be able to obtain or maintain such insurance on acceptable terms, or we may not be able to obtain any insurance to provide adequate coverage against potential liabilities, including liabilities arising from our clinical trials. Our inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or limit the commercialization of any products that we or our collaborators may develop.

**Risks Relating to Our Financial Position and Capital Requirements**

***We have incurred significant losses to date and may never be profitable.***

Although we had net income in 2010 of $85.2 million, primarily attributable to our License Agreement with Merck, we have incurred significant losses since our formation in 1991, and had an accumulated deficit of $557.0 million at December 31, 2011. Our losses have resulted principally from costs incurred in research and development of our product candidates, including clinical development of ponatinib, AP26113 and ridaforolimus (prior to our license with Merck), and from general and administrative costs, including costs incurred to prosecute and protect our intellectual property. In addition, we are building a commercial organization to market, sell and distribute our products upon regulatory approval in the United States, Europe and other select markets, worldwide. It is likely that we will incur significant operating losses for the foreseeable future, as we continue our research and development activities and continue to build a sales and marketing organization in anticipation of obtaining regulatory approval to

market one or more of our product candidates, which approval may never occur. We currently have no product revenues, limited license revenues and limited commitments for future licensing revenues other than our License Agreement with Merck, and we may not be able to generate such revenues in the future. If our losses continue and we and our existing collaborators or potential future collaborators are unable to successfully develop, commercialize, manufacture and market our product candidates and/or we are unable to enter into additional collaboration agreements or licenses for our intellectual property, we may never generate sufficient revenues to achieve profitability. Even if we and our collaborators are able to commercialize products and we are able to enter into collaboration agreements or licenses in the future, we may never generate sufficient revenues to have profitable operations.

***Insufficient funding may jeopardize our research and development programs and may require us to reduce our operations or prevent commercialization of our products and technologies.***

We have funded our operations to date through sales of equity securities, debt, the upfront and milestone payments received from Merck since July 2007, and, to a limited extent, operating revenues. Most of our operating revenue to date has been generated through previous collaborative research and development agreements and existing licenses.

As of December 31, 2011, we had cash and cash equivalents of $306.3 million. We estimate that our cash used in operations in 2012 will be in the range of $139 million to $147 million and that our net use of cash will be in the range of $138 million to $146 million. We will require substantial additional funding for our research and development programs (including pre-clinical development and clinical trials), for the pursuit of regulatory approvals and for establishing or accessing manufacturing, marketing and sales capabilities related to our product candidates. We will also require funding for our operating expenses (including intellectual property protection and enforcement) as well as capital expenditures to maintain and improve our facility, equipment and systems and provide for growth and expansion of our business.

We have the opportunity to receive near-term milestone payments from Merck in an amount of up to $40 million related to regulatory approvals of ridaforolimus in sarcomas, the first of which could occur in 2012. However, we may not receive these payments and funding at all, or in the timeframes we currently anticipate. As of December 31, 2011, we had outstanding warrants to purchase 5,805,843 shares of our common stock at an exercise price of $2.15 per share. All of these warrants were exercised in January and February of 2012 for proceeds to us of approximately $12.5 million.

In addition, we may from time to time access funding by issuing common stock or other securities in private placements or public offerings. We are currently a "well-known seasoned issuer" pursuant to rules of the U.S. Securities and Exchange Commission, or SEC, and have an active registration statement that allows us to sell additional shares of our common stock and other securities. We may also from time to time seek additional funding from technology licensing, or the issuance of debt or other structured funding alternatives. However, such additional funding may not be available at all, or on terms acceptable to us.

If we are not able to secure the significant funding which is required to maintain our operations or continue to fund current or future research and development programs at their current levels or at levels that may be required in the future, or establish or access capabilities necessary for commercialization of our product candidates, we may be required to reduce our operations or to delay, scale back, eliminate or terminate clinical trials for one or more of our product candidates. In addition, we may be required to enter into licenses, settlements or other arrangements with third parties on terms that may be unfavorable to us or to sell, license or relinquish rights to develop or commercialize our product candidates, approved products, technologies or intellectual property.

***Raising additional capital by issuing securities or through collaboration and licensing arrangements may cause dilution to existing stockholders, restrict our operations or require us to relinquish proprietary rights.***

We may seek to raise the additional capital necessary to fund our operations through public or private equity offerings, debt financings, and collaboration and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, our stockholders' ownership interest will be diluted, and the terms of such securities may include liquidation or other preferences that adversely affect our stockholders' rights. Our stockholders' ownership interest will also be diluted if additional warrants are exercised. If we raise additional funds through collaboration and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us.

***Significant additional losses or insufficient funding may cause us to default on certain covenants of our loan documents.***

At December 31, 2011, we had $12.6 million outstanding under a term loan agreement with a bank. Pursuant to this loan agreement, we are required to maintain certain financial and non-financial covenants, including minimum cash, cash equivalents and investments of $15 million, a default of any of which would allow the bank to demand payment of its loan. We currently have sufficient liquidity to fund payment of this loan if demand for payment were made. However, if we do not receive sufficient revenues from our collaborations and licenses or from any sales of our products, if approved, or if we are unable to raise adequate financing to fund continuing operations or otherwise to refinance our loan, we may not be able to maintain compliance with loan covenants, may be required to pay off the loan and may be required to reduce our spending on operations.

**Risks Relating to Our Dependence on Third Parties**

***We have limited experience in conducting clinical trials and are dependent upon the ability of third parties, including our collaborators, contract research organizations, collaborative academic groups, clinical trial sites and investigators, to conduct or to assist us in conducting clinical trials for our product candidates.***

We have limited experience in designing, initiating, conducting and monitoring the clinical trials necessary to obtain regulatory approval of our product candidates. We are currently conducting clinical trials of ponatinib and AP26113. Our License Agreement with Merck provides that Merck is responsible for the development, manufacturing and commercialization of ridaforolimus in multiple cancer indications. We are dependent upon our ability and/or the ability of our collaborators, licensees, contract research organizations, clinical trial sites and investigators to successfully design, initiate, conduct and monitor clinical trials. Failure by us or any of these parties to timely and effectively initiate, conduct and monitor our clinical trials could significantly delay or materially impair our ability to complete clinical trials and/or obtain regulatory approval of our product candidates and, consequently, could delay or materially impair our ability to generate milestones, royalties or other revenues from them.

***We have limited manufacturing experience and are dependent upon the ability of third parties to manufacture our product candidates.***

We have no experience in manufacturing any of our product candidates on a large scale and have contracted and expect to continue to contract with third-party manufacturers to provide material for clinical trials and potential commercial launch, and to assist in the development and optimization of our manufacturing processes and methods. Our ability to conduct clinical trials and commercialize our product candidates will depend on the ability of such third parties to manufacture our product candidates on a large scale at a competitive cost and in accordance with cGMPs and other regulatory requirements. If we are not able to obtain contract manufacturing on commercially reasonable terms,

obtain or develop the necessary materials and technologies for manufacturing, or obtain intellectual property rights necessary for manufacturing, or if our contract manufacturers fail to provide us with the quantities and quality of the products we require in a timely manner, we may not be able to conduct or complete clinical trials or commercialize our product candidates. There can be no assurance that we will be able to obtain the materials, technologies and intellectual property necessary to successfully manufacture our product candidates for clinical trials and commercialization.

***Risks associated with our international business relationships could materially adversely affect our business.***

We have manufacturing, collaborative and clinical trial relationships, and we and our collaborators are seeking approval for our drug candidates outside the United States. In addition, we expect that if ponatinib is approved for commercial sale, a significant portion of our commercial supply chain, including sourcing of raw materials and manufacturing, may be located outside the United States. We are planning to expand our operations in Europe in order to market ponatinib, if approved in the European Union. Consequently, we are, and will continue to be, subject to risks related to operating in foreign countries. Risks associated with conducting operations in foreign countries include:

- differing regulatory requirements for drug approvals in foreign countries;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses or reduced revenues, and other obligations incident to doing business or operating a subsidiary in another country;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations could materially adversely affect our business.

***Because we have licensed ridaforolimus to Merck, we are dependent on Merck for its successful development and commercialization.***

We have entered into a license agreement with Merck for the development and commercialization of ridaforolimus. Among other provisions, Merck is responsible for the development of ridaforolimus in multiple oncology indications. We depend heavily on Merck for the successful development and commercialization of ridaforolimus, if approved. There can be no assurance that Merck will satisfy its obligations to develop ridaforolimus in multiple oncology indications or that it will be successful in developing and commercializing ridaforolimus.

In addition, we cannot predict the success of our License Agreement with Merck or with any other license or collaboration we may enter. Each collaboration or license agreement may involve a complex allocation of responsibilities, costs and benefits. The third party may be responsible for conducting and funding much of the future development and regulatory approval activities for a product candidate and have control over the conduct and timing of development efforts for the product candidate. A third party's failure to devote sufficient financial and other resources to the development plan may delay the clinical development of a product candidate, which could lead to the delay in payment of clinical and regulatory

milestones under our agreements and may delay eventual commercialization of a product candidate and any royalties we could receive on commercial sales.

***We are dependent upon the ability of our medical device collaborators to develop, manufacture, test and market stents or other medical devices to deliver ridaforolimus.***

We have no experience in the development of medical devices and do not intend ourselves to develop stents or other medical devices to deliver ridaforolimus. Instead, we have granted licenses to Medinol and ICON and, under those license agreements, we may grant one additional license, to a medical device company for its use in developing and commercializing such medical devices to reduce blockage of injured vessels following stent-assisted angioplasty.

We and our medical device collaborators have limited experience in designing, conducting and managing the clinical trials necessary to obtain regulatory approval of drug-eluting stents or other combination products that use a medical device to deliver small-molecule drugs to reduce blockage of injured vessels following interventions in which stents are used in conjunction with balloon angioplasty. We are dependent upon the success of Medinol and ICON and any future medical device partner to successfully develop, manufacture and market stents or other medical devices to deliver ridaforolimus. If Medinol or ICON is not successful and/or if we are not able to enter into an agreement with an additional medical device company to develop, manufacture, and market medical devices to deliver ridaforolimus, we will not be able to generate revenues from the marketing of stents or other medical devices that deliver ridaforolimus.

While we expect to supply ridaforolimus to our medical device collaborators and any additional partner, we will be otherwise dependent upon them to develop and commercialize stents or other medical devices to deliver ridaforolimus. Such medical device collaborators have varying degrees of scientific, technical, medical and regulatory experience and resources to, directly or through third parties, develop, manufacture, test or market stents or other medical devices to deliver ridaforolimus. Our reliance on third-party manufacturers and their potential inability to meet our supply commitments to one or more of our collaborators could adversely impact the ability of our collaborators to commercialize stents or other medical devices to deliver ridaforolimus.

***If any collaborator or licensee terminates its agreement with us or fails to perform its obligations under its agreement with us, or fails to comply with applicable law, the development and commercialization of our product candidates could be delayed or terminated.***

Our use of collaborators and licensees for development of our product candidates means that our business would be adversely affected if any collaborator or licensee terminates its agreement with us or fails to perform its obligations under that agreement or under applicable law. Our current or future collaborations and licenses may not result in product candidates that are scientifically or commercially successful or result in the development or commercialization of any product candidates. In addition, disputes may arise in the future with respect to the ownership of rights to technology or product candidates developed with collaborators and licensees, which could have an adverse effect on our ability to develop and commercialize any affected product candidate.

Our current collaboration and license agreements allow, and we expect that any future collaborations and licenses will allow, either party to terminate the agreement for specified material breaches by the other party. If a collaborator or licensee terminates its agreement with us, for breach or otherwise, it may be difficult for us to attract new collaborators or licensees and could adversely affect how we are perceived in the business and financial communities. In addition, a collaborator or licensee could determine that it is in its financial interest to:

- pursue alternative technologies or develop alternative products, either on its own or jointly with others, that may be competitive with the products on which it is collaborating with us or has licensed from us, which could affect its commitment to us;

- pursue higher-priority programs or change the focus of its development programs, which could affect the collaborator's or licensee's commitment to us; or

- choose to devote fewer resources to the marketing of our product candidates, if any are approved for marketing, than it does for product candidates of its own development.

If any of these events occur, the development and commercialization of one or more of our product candidates could be delayed, curtailed or terminated because we may not have sufficient financial resources or capabilities to continue such development and commercialization on our own.

**Risks Related to Our Intellectual Property**

***We may not be able to protect our intellectual property relating to our research programs, technologies and product candidates or have clearance to practice such programs, technologies and candidates.***

We have issued patents and pending patent applications covering research methods useful in drug discovery, new chemical compounds discovered in our drug discovery programs including products-in-development, methods and materials for manufacturing our products-in-development and other pharmaceutical products and methods and materials for conducting pharmaceutical research. Pending patent applications may not issue as patents and may not issue in all countries in which we develop, manufacture or sell our products or in countries where others develop, manufacture and sell products using our technologies. In addition, patents issued to us or our licensors may be challenged, and they may be subsequently narrowed, invalidated or circumvented. In that event, such patents may not afford meaningful protection for our technologies or product candidates, which would materially impact our ability to develop and market our product candidates and to generate licensing revenues from our patent portfolio. Certain technologies utilized in our research and development programs are already in the public domain. Third parties, including a number of our competitors, however, have developed competing and/or complementary technologies upon which patent applications have been filed and patents have been granted. These third-party technologies concern in part compounds, compositions, methods of use and production of such compounds and compositions, targets, genes and gene mutations, and the use of such targets, genes and gene mutations to identify drug candidates and develop companion diagnostic methods and corresponding kits. Third party intellectual property protecting such technologies that are related to our business may cover or conflict with our patent applications, technologies or product candidates as well as those of complementary businesses which our business relies upon. Such conflicts could limit the scope of the patents that we may be able to obtain or may result in the denial of our patent applications. If a third party were to obtain intellectual property protection for any of the foregoing, we may be required to challenge such protection, terminate or modify our programs impacted by such protection or obtain licenses from such third parties, which might not be available on acceptable terms. Also, if a third party were to introduce a product into the market which we believe infringes our patents, we may be required to enforce our patent rights or seek to obtain an injunction or other relief, which could be time-consuming and expensive.

***If we are unable to protect the confidentiality of our trade secrets, our business and competitive position could be harmed.***

In addition to seeking patents for some of our technology and products, we also rely on trade secrets, including unpatented know-how, technology, and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties that have access to them, such as our employees, collaborators, outside scientific collaborators, sponsored researchers, contract manufacturers, consultants, advisors and

other third parties. We also have entered into confidentiality and invention or patent assignment agreements with our employees and our consultants. Any of these parties may breach the agreements and disclose our proprietary information, and we may not have adequate remedies for any such breach. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. If any our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position could be harmed.

**Risks Related to Our Employees and Growth**

***The loss of key members of our scientific and management staff could delay and may prevent the achievement of our research, development and business objectives.***

We are substantially dependent on our key officers and members of our staff responsible for areas such as drug development, clinical trials, regulatory affairs, drug discovery, manufacturing, commercial operations, business development and intellectual property protection and licensing. As we expand our capabilities in anticipation of the possible launch of commercial products, a loss of key personnel or a failure to properly integrate new personnel could be disruptive. While we have entered into employment agreements with all of our executive officers, these officers may terminate their employment with us at any time. The value to employees of stock-related benefits that vest over time, such as options and restricted stock units, will be significantly affected by movements in our stock price that we cannot control, and may at any point in time be insufficient to counteract more lucrative offers from other companies. The loss of, and failure to promptly replace, any member of our management team could significantly delay and may prevent the achievement of our research, development and business objectives.

***If we fail to expand our development, regulatory and sales and marketing capabilities, and manage our growth effectively, our business could be harmed.***

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs and sales and marketing. Recently, we have begun to build out the commercial organization that will be responsible for the commercial launch of ponatinib in the United States, if it receives marketing approval. Because our drug discovery and development activities are highly technical in nature, we require the services of highly qualified and trained scientists who have the skills necessary to conduct these activities. In addition, we need to attract and retain employees with experience in these fields. We face intense competition for our personnel from our competitors, our collaborators and other companies throughout our industry. Moreover, the growth of local biotechnology companies and the expansion of major pharmaceutical companies into the Boston area have increased competition for the available pool of skilled employees, especially in technical fields, and the high cost of living in the Boston area makes it difficult to attract employees from other parts of the country to these areas. Any inability to manage growth could delay the implementation of our business plans or disrupt our operations. Depending on the rate at which we expand our workforce, we may need to seek alternative space for our operations in the future, which may not be available to us on reasonable terms. Our ability to achieve our research and development objectives and to commercialize our drug candidates depends on our ability to respond effectively to these demands and expand our internal organization to accommodate additional anticipated growth. If we are unable to hire qualified personnel or manage our growth effectively, there could be a material adverse effect on our business.

**Risks Relating to Regulatory Approvals, Pricing and Reimbursement**

***Clinical trials for our product candidates are expensive and time consuming, may take longer than we expect or may not be completed at all, and their outcome is uncertain.***

We and our collaborators are currently conducting multiple clinical trials for our clinical product candidates, and we and our collaborators expect to commence additional trials of ponatinib and our other product candidates in the future. Each of our clinical trials requires the investment of substantial expense and time and the timing of the commencement, continuation and completion of these clinical trials may be subject to significant delays relating to various causes, including scheduling conflicts with participating clinicians and clinical institutions, difficulties in identifying and enrolling patients who meet trial eligibility criteria, failure of patients to complete the clinical trial, delay or failure to obtain IRB approval to conduct a clinical trial at a prospective site, and shortages of available drug supply. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the existence of competing clinical trials and the availability of alternative or new treatments.

We depend on medical institutions and clinical research organizations, or CROs, to conduct our clinical trials in compliance with Good Clinical Practice, and to the extent they fail to enroll patients for our clinical trials or are delayed for a significant time in achieving full enrollment, we may be affected by increased costs, program delays or both, which may harm our business. In addition, we conduct clinical trials in foreign countries which may subject us to further delays and expenses as a result of increased drug shipment costs, additional regulatory requirements and the engagement of foreign CROs, as well as expose us to risks associated with less experienced clinical investigators who are unknown to the FDA, different standards of medical care, and foreign currency transactions insofar as changes in the relative value of the United States dollar to the foreign currency where the trial is being conducted may impact our actual costs.

Clinical trials must be conducted in accordance with FDA or other applicable foreign government guidelines and are subject to oversight by the FDA, other foreign governmental agencies and IRBs at the medical institutions where the clinical trials are conducted. In addition, clinical trials must be conducted with supplies of our product candidates produced under GMP and other requirements in foreign countries, and may require large numbers of test patients. We, the FDA or other foreign governmental agencies could delay, suspend or halt our clinical trials of a product candidate for numerous reasons, including:

- deficiencies in the conduct of the clinical trial, including failure to conduct the clinical trial in accordance with regulatory requirements or clinical protocols;
- deficiencies in the clinical trial operations or trial sites resulting in the imposition of a clinical hold;
- the product candidate may have unforeseen adverse side effects, including fatalities, or a determination may be made that a clinical trial presents unacceptable health risks;
- the time required to determine whether the product candidate is effective may be longer than expected;
- fatalities or other adverse events arising during a clinical trial due to medical problems that may not be related to clinical trial treatments;
- the product candidate may not appear to be more effective than current therapies;
- the quality or stability of the product candidate may fall below acceptable standards;
- our inability to produce or obtain sufficient quantities of the product candidate to complete the trials;
- our inability to reach agreement on acceptable terms with prospective CROs and trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- our inability to obtain IRB approval to conduct a clinical trial at a prospective site;
- lack of adequate funding to continue the clinical trial, including the incurrence of unforeseen costs

due to enrollment delays, requirements to conduct additional trials and studies and increased expenses associated with the services of our CROs and other third parties;
- our inability to recruit and enroll patients to participate in clinical trials for reasons including competition from other clinical trial programs for the same or similar indications; or
- our inability to retain patients who have initiated a clinical trial but may be prone to withdraw due to side effects from the therapy, lack of efficacy or personal issues, or who are lost to further follow-up.

In addition, clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Negative or inconclusive results or adverse medical events, including patient fatalities that may be attributable to our product candidates, during a clinical trial could cause it to be redone or terminated. Further, some of our clinical trials may be overseen by an independent data monitoring committee, or IDMC, and an IDMC may determine to delay or suspend one or more of these trials due to safety or futility findings based on events occurring during a clinical trial.

If clinical trials of any of our product candidates fail, we or our collaborators may not be able to market the product candidate which is the subject of the failed clinical trials. The FDA and foreign regulatory agencies could also require additional clinical trials before or after granting of marketing approval for any products, which would result in increased costs and significant delays in the development and commercialization of such products and could result in the withdrawal of such products from the market after obtaining marketing approval. Our failure, or the failure of our collaborators, to adequately demonstrate the safety and efficacy of a product candidate in clinical development could delay or prevent obtaining marketing approval of the product candidate and, after obtaining marketing approval, data from post-approval studies could result in the product being withdrawn from the market, either of which would likely have a material adverse effect on our business.

***We may not be able to obtain government regulatory approval to market our product candidates.***

To date, none of our product candidates has been approved for commercialization in any country. Prior to commercialization, each product candidate will be subject to an extensive and lengthy governmental regulatory approval process in the United States and in other countries. We or our collaborators may not be able to obtain regulatory approval for any product candidates, or even if approval is obtained, the labeling for such products may place restrictions on their use that could materially impact the marketability and profitability of the product subject to such restrictions. Satisfaction of these regulatory requirements, which includes satisfying the FDA and foreign regulatory authorities that the product is both safe and effective for its intended uses, typically takes several years or more depending upon the type, complexity, novelty and safety profile of the product and requires the expenditure of substantial resources. Uncertainty with respect to meeting the regulatory requirements governing our product candidates may result in excessive costs or extensive delays in the regulatory approval process, adding to the already lengthy review process. If regulatory approval of a product is granted, such approval will be limited to those disease states and conditions for which the product is proven safe and effective, as demonstrated by clinical trials, and may not include all of the indications necessary to successfully market the product.

***We will not be able to sell our product candidates if we, or our third-party manufacturers fail to comply with FDA manufacturing and quality requirements.***

Before approving any of our product candidates, the FDA will inspect the facility or facilities at which the drug product is manufactured and will not approve the drug candidate unless it is satisfied with our or our third-party manufacturer's compliance with manufacturing and quality requirements. The manufacturing of our product candidates must comply with cGMP requirements of the FDA and similar requirements of regulatory agencies in other countries. These requirements govern, among other things, quality control and documentation procedures. We, or any third-party manufacturer of our product candidates, may not be able to comply with these requirements, which would prevent us from obtaining

approval for or selling such products. Material changes to the manufacturing processes of products after approvals have been granted are also subject to review and approval by the FDA or other regulatory agencies. Following approval, such facilities are subject to continuing FDA and foreign regulatory inspections and failure to comply with cGMPs or similar regulations could result in regulatory action up to and including cessation of shipment of product.

***Even if we or our collaborators bring products to market, we or they may be unable to effectively price the products or obtain adequate reimbursement for sales of the products, which would prevent the products from becoming profitable.***

If we or our collaborators succeed in bringing any product candidates to the market, they may not be considered cost-effective, and coverage and adequate payments may not be available or may not be sufficient to allow us to sell such products on a competitive basis. In both the United States and elsewhere, sales of medical products and the availability or acceptance of treatments are dependent, in part, on the availability of reimbursement from third-party payors, such as health maintenance organizations and other commercial insurance plans and governmental programs such as Medicare. Third-party payors, including Medicare, are increasingly challenging the prices charged for pharmaceutical products and medical procedures.

***Healthcare policy changes may have a material adverse effect on us.***

Our business may be affected by the efforts of government and third-party payors to contain or reduce the cost of health care through various means. For example, the Patient Protection and Affordable Care Act and the Health Care and Education Affordability Reconciliation Act of 2010 (collectively, the Affordable Care Act or ACA), enacted in March 2010, substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. With regard to pharmaceutical products, among other things, ACA is expected to expand and increase industry rebates for drugs covered under Medicaid programs and make changes to the coverage requirements under the Medicare D program. ACA is currently being challenged in the courts and there are also congressional efforts to repeal ACA. This adds to the uncertainty of the legislative changes enacted as part of ACA, and we cannot predict the impact of ACA or any other legislative or regulatory proposals will have on our business.

***Each of our product candidates will remain subject to ongoing regulatory review even if it receives marketing approval. If we or our collaborators or contractors fail to comply with continuing regulations, we or they may be subject to enforcement action that could adversely affect us.***

We and our collaborators and contractors will continue to be subject to pervasive regulation by the FDA and other regulatory authorities even after our product candidates become approved products. We and our collaborators and contractors will continue to be subject to FDA requirements governing, among other things the manufacture, packaging, sale, promotion, adverse event reporting, storage and recordkeeping of our approved products. The Commissioner of the FDA has put FDA-regulated entities on notice that they should expect to see more enforcement actions in all areas regulated by the FDA. Although we have not received any notice that we are the subject of any such enforcement action, it is possible that we may be in the future and that could have a material adverse effect on our business. We or any applicable collaborator of ours may be slow to adapt, or may never adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements.

If we or any applicable collaborator of ours fails to comply with the requirements of the FDA and other applicable U.S. or foreign governmental or regulatory authorities or previously unknown problems with our products, manufacturers or manufacturing processes are discovered, we or the collaborator could be subject to administrative or judicially imposed sanctions, including restrictions on the products, manufacturers or manufacturing processes; warning letters; civil or criminal penalties; fines; injunctions; product seizures or detentions; import bans; voluntary or mandatory product recalls and publicity

requirements; suspension or withdrawal of regulatory approvals; total or partial suspension of production; and refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications.

**Risks Relating to Our Common Stock**

***Results of our operations, general market conditions for biotechnology stocks and other factors could result in a sudden change in the value of our stock.***

As a biopharmaceutical company with no products currently on the market, we continue to experience significant volatility in the price of our common stock. In 2011, our stock price ranged from a high of $13.50 to a low of $5.04. Some of the many factors that could contribute to such volatility include:

- announcements regarding results and timing of preclinical studies and clinical trials for our product candidates;
- our plans for seeking marketing approval and the expected timing of any regulatory approvals of our product candidates;
- announcements of financial results and other operating performance measures, including product revenues during the initial period after ponatinib's commercial launch;
- our funding resources and requirements, including announcements of new equity or debt financings;
- evidence of the safety or efficacy of our product candidates;
- decisions by regulatory agencies that may impact our product candidates;
- the timing of our receipt of, or our failure to receive, future milestones under our License Agreement with Merck;
- announcements regarding existing collaborations or new collaborations or our failure to enter into collaborations;
- announcements regarding product developments or regulatory approvals obtained by companies developing competing products;
- announcements of technological innovations or new therapeutic product candidates;
- developments relating to intellectual property rights, including licensing, litigation and governmental regulation;
- healthcare or cost-containment legislation and public policy pronouncements;
- sales of our common stock by us, our insiders or our other stockholders;
- market conditions for biopharmaceutical stocks in general; and
- general economic and market conditions.

The stock markets, and the markets for biotechnology stocks in particular, have experienced volatility that has often been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock. Investors may not be able to sell when they desire due to insufficient buyer demand and may realize less than, or lose all of, their investment.

***Anti-takeover provisions of Delaware law and provisions in our charter and bylaws could delay, discourage or make more difficult a third-party acquisition of control of us.***

Because we are a Delaware corporation, the certain provisions of Delaware law could delay, discourage or make more difficult a third-party acquisition of control of us, even if the change in control would be beneficial to stockholders or the stockholders regard it as such. We are subject to the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which prohibits certain "business combination" transactions (as defined in Section 203) with an "interested stockholder" (defined in Section 203 as a 15% or greater stockholder) for a period of three years after a stockholder becomes an "interested stockholder", unless the attaining of "interested stockholder" status or the transaction is pre-approved by our board of directors, the transaction results in the attainment of at least an 85% ownership level by an acquirer or the transaction is later approved by our board of directors and by our stockholders by at least

a 66 2/3% vote of our stockholders other than the "interested stockholder", each as specifically provided in Section 203.

In addition, because our board of directors is a classified board, as described below, Section 141(k)(1) of the DGCL provides that directors may only be removed by the stockholders and then only for "cause". Further, Section 242(b)(1) of the DGCL provides that amendment of our certificate of incorporation requires that the amendment be determined by the board of directors to be advisable and be submitted by our board of directors to our stockholders for action by them and then approved by our stockholders holding a majority of the outstanding shares of our common stock.

Our certificate of incorporation and our bylaws, each as currently in effect, also contain certain provisions that may delay, discourage or make more difficult a third-party acquisition of control of us:

- a classified board of directors, with three classes of directors, each serving for a staggered three-year term, such that not all members of the board of directors may be elected at one time;
- the authorized number of directors may be changed only by resolution of the board of directors;
- any vacancies on the board of directors may only be filled by a majority of the directors then serving, although not a quorum, and not by the stockholders;
- the ability of the board of directors to issue preferred stock that could dilute the stock ownership of a potential unsolicited acquirer and so possibly hinder an acquisition of control of us that is not approved by our board of directors, including through the use of preferred stock in connection with a shareholder rights plan which we could adopt by action of the board of directors;
- record date-setting provisions for annual and special meetings of stockholders and actions by written consent, provisions regulating the conduct of meetings of stockholders and action by written consent, and "advance notice" timing and informational requirements for stockholder nominations to our board of directors at stockholder meetings or for stockholder proposals that can be acted on at stockholder meetings or by written consent; and
- the inability of our stockholders to call a special meeting of stockholder, the limitation of matters to be acted upon at an annual meeting of stockholders to those matters proposed by the Company or properly brought before the meeting and the limitation of matters to be acted upon at a special meeting of stockholders to matters which we place on the agenda for the meeting.

These provisions of the DGCL and our certificate of incorporation and our bylaws may delay, discourage or make more difficult certain types of transactions in which our stockholders might otherwise receive a premium for their shares over the current market price, and might limit the ability of our stockholders to approve transactions that they think may be in their best interest.

## ITEM 1B: UNRESOLVED STAFF COMMENTS

None.

## ITEM 2: PROPERTIES

We have leased approximately 100,000 square feet of laboratory and office space at 26 Landsdowne Street, Cambridge, Massachusetts through July 2019, with two five-year renewal options. We expect to require additional space in 2012 and beyond as we expand our business activities throughout the United States and in Europe in connection with the potential commercial launch of one or more of our product candidates. We believe that any additional space we may require will be available on commercially reasonable terms.

## ITEM 3. LEGAL PROCEEDINGS

None.

## ITEM 4: MINE SAFETY DISCLOSURES

None.

## PART II

## ITEM 5: MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

### Market Information

Effective January 3, 2012, our common stock is traded on The NASDAQ Global Select Market under the symbol "ARIA". The following table sets forth the high and low sales prices of our common stock as quoted on The NASDAQ Global Market for the periods indicated.

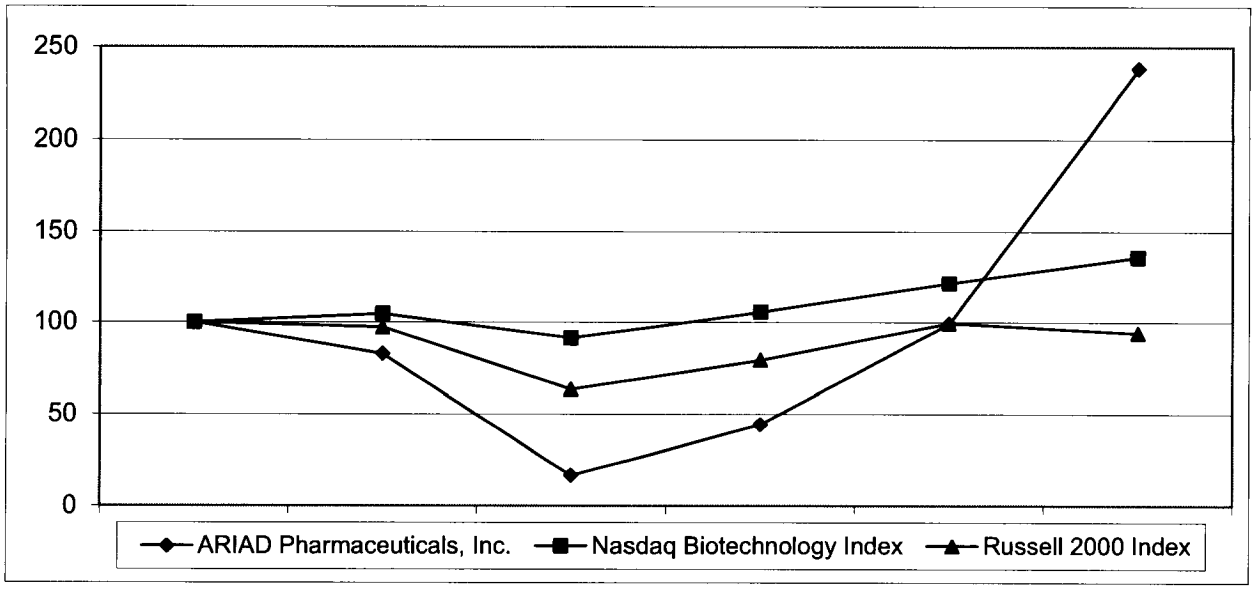
| 2011: | High | Low |
|---|---|---|
| First Quarter | $ 7.69 | $ 5.04 |
| Second Quarter | 11.94 | 7.50 |
| Third Quarter | 13.50 | 7.55 |
| Fourth Quarter | 12.66 | 7.72 |
| | | |
| **2010:** | | |
| First Quarter | $ 3.92 | $ 2.06 |
| Second Quarter | 4.41 | 2.80 |
| Third Quarter | 3.85 | 2.57 |
| Fourth Quarter | 5.44 | 3.51 |

On February 15, 2012, the last reported sale price of our common stock was $15.05.

### Stock Performance Graph

The following graph compares the yearly percentage change in the cumulative total stockholder return on our common stock since December 31, 2006, with the total cumulative return of the NASDAQ Biotechnology Index and the Russell 2000® Index, in each of which ARIAD is listed. The Russell 2000 Index is a market capitalization-weighted index of stock price performance for the 2,000 smallest companies in the Russell 3000® Index. Since the Russell 2000 Index is specifically designed to measure the stock price trends of smaller companies, we believe it is a meaningful index against which to compare our stock price performance.

The price of a share of common stock is based upon the closing price per share as quoted on The NASDAQ Global Market on the last trading day of the year shown. The graph lines merely connect year-end values and do not reflect fluctuations between those dates. The comparison assumes $100 was invested on December 31, 2006 in our common stock and in each of the foregoing indices. We did not declare or pay any dividends during the comparison period. The stock price performance as shown in the graph below is not necessarily indicative of future stock price performance.




| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| ARIAD Pharmaceuticals, Inc. | 100.00 | 82.68 | 16.54 | 44.36 | 99.22 | 238.33 |
| Nasdaq Biotechnology Index | 100.00 | 104.58 | 91.38 | 105.66 | 121.52 | 135.86 |
| Russell 2000 Index | 100.00 | 97.25 | 63.41 | 79.40 | 99.49 | 94.07 |

The performance graph shall not be deemed to be incorporated by reference by means of any general statement incorporating by reference this Form 10-K into any filing under the Securities Act of 1933, as amended or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate such information by reference, and shall not otherwise be deemed filed under such acts.

**Stockholders**

As of February 15, 2012, the approximate number of holders of record of our common stock was 400, and the approximate total number of beneficial holders of our common stock was 48,000.

**Dividends**

We have not declared or paid dividends on our common stock in the past and do not intend to declare or pay such dividends in the foreseeable future. Our long-term debt agreement prohibits the payment of cash dividends.

**Unregistered Sales of Securities**

Not applicable.

**Issuer Purchases of Equity Securities**

Not applicable.

## ITEM 6: SELECTED FINANCIAL DATA

The selected financial data set forth below as of December 31, 2011, 2010, 2009, 2008 and 2007 and for each of the years then ended have been derived from the audited consolidated financial statements of the Company, of which the financial statements as of December 31, 2011 and 2010 and for the years ended December 31, 2011, 2010 and 2009 are included elsewhere in this Annual Report on Form 10-K. The information set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the audited consolidated financial statements, and the notes thereto, and other financial information included herein.

| | Years Ended December 31, | | | | |
|---|---|---|---|---|---|
| *In thousands, except per share data* | **2011** | **2010** | **2009** | **2008** | **2007** |
| **Consolidated Statements of Operations Data:** | | | | | |
| License and collaboration revenue [1] | $ 25,189 | $ 174,460 | $ 8,302 | $ 7,082 | $ 3,583 |
| Service revenue [1] | 111 | 4,520 | --- | --- | --- |
| Total revenue | 25,300 | 178,980 | 8,302 | 7,082 | 3,583 |
| Operating expenses: | | | | | |
| Research and development | 77,743 | 57,985 | 63,447 | 50,841 | 39,565 |
| General and administrative | 24,380 | 16,095 | 16,888 | 28,092 | 24,712 |
| Total operating expenses | 102,123 | 74,080 | 80,335 | 78,933 | 64,277 |
| Income (loss) from operations | (76,823) | 104,900 | (72,033) | (71,851) | (60,694) |
| Other income (expense): | | | | | |
| Interest income (expense), net | (65) | (120) | (171) | 799 | 2,172 |
| Revaluation of warrant liability [2] | (46,715) | (19,532) | (7,804) | --- | --- |
| Other income (expense), net | (46,780) | (19,652) | (7,975) | 799 | 2,172 |
| Net income (loss) | $ (123,603) | $ 85,248 | $ (80,008) | $ (71,052) | $ (58,522) |
| Net income (loss) per share – basic | $ (0.93) | $ 0.75 | $ (0.86) | $ (1.02) | $ (0.86) |
| – diluted | $ (0.93) | $ 0.74 | $ (0.86) | $ (1.02) | $ (0.86) |
| Weighted average number of shares of common stock outstanding – basic | 132,375 | 113,020 | 93,330 | 69,791 | 68,216 |
| – diluted | 132,375 | 114,734 | 93,330 | 69,791 | 68,216 |

| | As of December 31, | | | | |
|---|---|---|---|---|---|
| *In thousands* | **2011** | **2010** | **2009** | **2008** | **2007** |
| **Consolidated Balance Sheet Data:** | | | | | |
| Cash, cash equivalents and marketable securities | $ 306,256 | $ 103,630 | $ 40,362 | $ 38,369 | $ 84,499 |
| Working capital | 282,195 | 88,775 | 8,212 | 13,475 | 63,892 |
| Total assets | 320,712 | 120,030 | 65,010 | 68,188 | 101,105 |
| Total deferred revenue [1] | 999 | --- | 111,611 | 97,264 | 85,845 |
| Long-term debt and capital lease obligations | 11,215 | 8,294 | 142 | 11,622 | --- |
| Warrant liability [2] | 58,639 | 28,815 | 11,363 | --- | --- |
| Accumulated deficit | (556,963) | (433,360) | (518,608) | (438,600) | (367,549) |
| Stockholders' equity (deficit) | 220,141 | 64,076 | (89,016) | (69,198) | (7,900) |

[1] During 2010, we modified our collaboration agreement with Merck and entered into a license agreement. As a result of this modification, additional payments were received and deferred revenue was recognized, as further discussed in Note 2 to the consolidated financial statements. Pursuant to the license agreement, we provided transitional services to Merck and recognized service revenue in 2010 and 2011.

[2] In 2009, we issued warrants that are accounted for as a derivative liability. The change in fair value of outstanding warrants is recorded in our statement of operations. Upon exercise of all remaining warrants in January and February 2012, the balance of the warrant liability was credited to stockholders' equity and the liability was eliminated. See notes 8 and 9 to the consolidated financial statements.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The information set forth below should be read in conjunction with the audited consolidated financial statements, and the notes thereto, and other financial information included herein.*

### Overview

Our vision is to transform the lives of cancer patients with breakthrough medicines. Our mission is to discover, develop and commercialize small-molecule drugs to treat cancer in patients with the greatest and most urgent unmet medical need - aggressive cancers where current therapies are inadequate. Our goal is to build a fully integrated oncology company focused on novel, molecularly targeted therapies to treat solid tumors and hematologic cancers.

*Financial Condition and Results of Operations*

At December 31, 2011, we had cash and cash equivalents of $306.3 million, working capital of $282.2 million, and total stockholders' equity of $220.1 million compared to cash and cash equivalents of $103.6 million, working capital of $88.8 million, and total stockholders' equity of $64.1 million at December 31, 2010. For the year ended December 31, 2011, we reported a net loss of $123.6 million and cash used in operating activities of $53.3 million. Based on our current operating plan, we believe that our cash and cash equivalents at December 31, 2011, together with the proceeds of warrant exercises received to date in 2012, will be sufficient to fund our operations for at least two years.

*Product Development and Discovery*

Our pipeline currently contains three product candidates – ponatinib, AP26113 and ridaforolimus.

Ponatinib, previously known as AP24534, is an investigational pan BCR-ABL inhibitor that we believe has potential applications in various hematological cancers and solid tumors. In the third quarter of 2011, we completed patient enrollment in a pivotal Phase 2 clinical trial of ponatinib in patients with resistant or intolerant chronic myeloid leukemia, or CML, or Philadelphia positive acute lymphoblastic leukemia, or Ph+ ALL. Subject to further patient follow-up and data analysis in this trial, we expect to file for marketing approval of ponatinib in the United States and Europe in the third quarter of 2012 with potential regulatory approval in the United States as soon as the first quarter of 2013. Subject to obtaining marketing approval, we intend to commercialize ponatinib in the United States and Europe and other select markets worldwide. We also plan to initiate additional clinical trials of ponatinib, including a Phase 3 clinical trial in newly diagnosed CML patients, and commence clinical trials of ponatinib in Japan, in the second half of 2012.

AP26113 is an investigational dual inhibitor of anaplastic lymphoma kinase, or ALK, and epidermal growth factor receptor, or EGFR – two clinically validated targets in non-small cell lung cancer, or NSCLC. We initiated patient enrollment in a Phase 1/2 clinical trial of AP26113 in the third quarter of 2011. We expect to enroll approximately 30 to 50 patients in this portion of the trial. The Phase 2 portion of the trial is expected to begin in the second half of 2012 and is planned to enroll approximately 80 additional patients. Depending on the results of this trial, we could to conduct a potential pivotal trial of AP26113 in patients with NSCLC commencing in 2013.

Ridaforolimus is an investigational mTOR inhibitor that we discovered internally and later licensed in 2010 to Merck. Under the license agreement, Merck is responsible for all activities and has agreed to fund 100 percent of the costs related to the development, manufacturing and commercialization of ridaforolimus in oncology. We intend to co-promote ridaforolimus in the United States, if approved. In the third quarter of 2011, Merck filed in both Europe and the United States for regulatory approval of ridaforolimus in patients with metastatic soft-tissue and bone sarcomas who had a favorable response to

chemotherapy. Under the license agreement, Merck has agreed to pay us milestone payments based on successful development of ridaforolimus and achievement of specified sales thresholds, as well as tiered, double-digit royalties on global net sales.

In addition to our lead development programs, we have a focused drug discovery program centered on small-molecule therapies that are molecularly targeted to cell-signaling pathways implicated in cancer.

*Our Collaboration and License Agreements with Merck*

In July 2007, we entered into a global collaboration agreement, or the Collaboration Agreement, with Merck, under which we shared responsibility for the development, manufacturing and commercialization of ridaforolimus for use in cancer. The Collaboration Agreement as in effect until May 4, 2010 provided that each party would fund 50 percent of global development costs incurred. Under the terms of the Collaboration Agreement, Merck paid us an initial up-front payment of $75 million in July 2007 and milestone payments of $53.5 million through May 4, 2010 based on the achievement of specified clinical and regulatory events.

In May 2010, we entered into an amended and restated agreement with Merck, referred to as the License Agreement, which replaced the Collaboration Agreement. Under the terms of the License Agreement, we granted Merck an exclusive license to develop, manufacture and commercialize ridaforolimus in oncology, and Merck assumed responsibility for all activities related to the development, manufacture and commercialization of ridaforolimus and funds 100 percent of all ridaforolimus costs incurred after January 1, 2010. The License Agreement provides that all ridaforolimus activities that had been our responsibility under the Collaboration Agreement would be transitioned to Merck, a process that was completed in the fourth quarter of 2010. The License Agreement provides that Merck will develop ridaforolimus in multiple oncology indications. If ridaforolimus receives regulatory approval, Merck will be responsible for selling ridaforolimus worldwide, will record global sales and will pay us tiered double-digit royalties on global net sales. The License Agreement provided us with an option to co-promote ridaforolimus for all indications in the United States and, in such case, we would be compensated by Merck for our sales efforts. We have elected to exercise our option to co-promote ridaforolimus for the sarcoma indication, subject to the terms of a co-promotion agreement being negotiated by us and Merck.

Under the License Agreement, Merck paid us an initial up-front fee of $50 million in the second quarter of 2010 and has agreed to pay us up to $514 million in potential regulatory and sales milestone payments, based on the successful development of ridaforolimus in multiple potential cancer indications or upon achievement of specified product sales thresholds. Through December 31, 2011, Merck has paid us a $25 million milestone payment, in the third quarter of 2011, for acceptance of the marketing authorization application in Europe for the sarcoma indication. Potential additional milestone payments include up to $40 million associated with potential regulatory approvals for the sarcoma indication (consisting of $25 million for marketing approval in the United States, $10 million for approval to sell ridaforolimus in the European Union, including first pricing and reimbursement approval granted by a regulatory authority in any major European country or by the EMA, and $5 million for marketing approval of ridaforolimus in Japan), up to $249 million associated with potential regulatory filings and approvals for other cancer indications, and up to $200 million associated with the achievement of certain sales thresholds.

In accordance with our revenue recognition policy, upon execution of the License Agreement, all previously deferred revenue from the Collaboration Agreement was recognized as revenue in the three-month period ended June 30, 2010, which in combination with $62.8 million of payments received from Merck pursuant to the License Agreement, was the primary contributor to our license and collaboration revenue of $174.5 million and our net income of $85.2 million for the year ended December 31, 2010.

**Critical Accounting Policies and Estimates**

Our financial position and results of operations are affected by subjective and complex judgments, particularly in the areas of revenue recognition, the carrying value of intangible assets, accrued product development expenses and the fair value of warrants to purchase our common stock.

*Revenue Recognition*

We generate revenue from license and collaboration agreements with third parties related to use of our technology and/or development and commercialization of product candidates. Such agreements may provide for payment to us of up-front payments, periodic license payments, milestone payments and royalties. We also generated revenue from services provided under license agreements.

For the year ended December 31, 2011, we reported total revenue of $25.3 million. Revenue is recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable and collection is reasonably assured. Effective January 1, 2011, we adopted the guidance for accounting for multiple element revenue arrangements included in Accounting Standards Update No. 2009-13. The adoption had no impact on our consolidated financial statements. Revenue arrangements with multiple elements are divided into separate units of accounting if certain criteria are met, including whether the delivered element has stand-alone value to the customer and is based on the selling price of the deliverables. When deliverables are separable, consideration received is allocated to the separate units of accounting based on the relative selling price of the elements and the appropriate revenue recognition principles are applied to each unit.

The assessment of multiple element arrangements requires judgment in order to determine the appropriate units of accounting and the points in time that, or periods over which, revenue should be recognized. Regarding our Collaboration Agreement with Merck for the development, manufacturing and commercialization of ridaforolimus, in effect from July 2007 to May 2010, we determined the license and development deliverables constituted one unit of accounting and, therefore, the up-front and milestone payments were deferred and recognized over the performance period. Regarding our License Agreement with Merck entered into in May 2010 that replaced the Collaboration Agreement, we determined that the license and the transition services were separate units of accounting, and because the fair value of the undelivered transition services was known, the amounts received related to the license and transition services are recognized in the period in which they are received or the services are rendered. Milestone payments under the License Agreement are recognized when earned. In the year ended December 31, 2011, the Company received and recorded as revenue a $25 million milestone payment.

*Intangible Assets*

At December 31, 2011, we reported $5.8 million of intangible assets, consisting of capitalized costs related primarily to purchased and issued patents, patent applications and licenses and the recorded value of the technology associated with our acquisition in September 2008 of the 20-percent minority interest of ARIAD Gene Therapeutics, Inc. that we did not previously own, net of accumulated amortization. The carrying value of these intangible assets is evaluated for possible impairment, and losses are recorded when the evaluation indicates that the carrying value is not recoverable. This evaluation involves estimates of future net cash flows expected to be generated by the asset. Such estimates require judgment regarding future events and expected cash flows. Changes in these estimates, including decisions to discontinue using the technologies, could result in material changes to our balance sheet and charges to our statements of operations. If we were to abandon the ongoing development of the underlying product candidates or technologies or terminate our efforts to pursue collaborations or license agreements, we may be required to write down or write off a portion of the carrying value of our intangible assets. In 2010, we recorded charges of $2.4 million in our statement of operations related to the discontinuation of

efforts to pursue our NF-κB technology and to the assessment of the recoverability of our ARGENT technology and certain other technologies.

*Accrued Product Development Expenses*

We accrue expenses for our product development activities based on our estimates of services performed or progress achieved pursuant to contracts and agreements with multiple vendors including research laboratories, contract manufacturers, contract research organizations and clinical sites. These estimates are recorded in research and development expenses in our statement of operations and are reflected in accrued product development expenses on our balance sheet. At December 31, 2011, we reported accrued product development expenses of $11.9 million on our balance sheet.

Our estimates of services performed or progress achieved are based on all available information we have from reports, correspondence and discussions with our vendors. Our estimates of accrued expenses based on such information require judgment. Actual costs may vary from such estimates. When such variances become known, we adjust our expenses accordingly.

*Fair Value of Warrants*

Warrants outstanding at December 31, 2011 to purchase 5,805,843 shares of our common stock, issued on February 25, 2009 in connection with a registered direct offering of our common stock, are classified as a derivative liability. Accordingly, the fair value of the warrants is recorded on our balance sheet as a liability, and such fair value is adjusted at each financial reporting date with the adjustment to fair value reflected in our consolidated statement of operations. At December 31, 2011, we reported a warrant liability of $58.6 million on our balance sheet.

During the year ended December 31, 2011, a total of 3,757,767 warrants were exercised for proceeds to us of approximately $8.1 million. Upon exercise of the warrants, the warrant liability is reduced by the portion of the warrant liability applicable to the exercised warrants, and stockholders' equity is increased by this same amount plus the proceeds from the exercise.

All of the warrants that were outstanding on December 31, 2011 were exercised in January and February 2012 for proceeds to us of approximately $12.5 million. Upon the exercise of these remaining warrants, the balance of the warrant liability was credited to stockholders' equity and the liability was eliminated.

The fair value of the warrants is determined using the Black-Scholes option valuation model. Fluctuations in the assumptions and factors used in the Black-Scholes model would result in adjustments to the fair value of the warrants recorded on our balance sheet reflected through charges or credits in our statement of operations. The primary factor in the Black-Scholes model that impacts the fair value of the warrants is the market value of our common stock on the date of the valuation. If the market value of our common stock on December 31, 2011 were 10 percent higher or lower than used in the valuation of such warrants, our valuation of the warrants would have increased or decreased by $7.1 million with such difference reflected in our statement of operations. Because the current market price of our common stock is significantly in excess of the exercise price of the warrants, other assumptions do not have a significant impact on the valuation of the warrants as of December 31, 2011.

**Results of Operations**

***Years Ended December 31, 2011 and 2010***

***Revenue***

We recorded total revenue of $25.3 million for the year ended December 31, 2011, compared to $179.0 million for the year ended December 31, 2010. Total revenue in 2011 consisted primarily of a $25 million

milestone payment received pursuant to our License Agreement with Merck for the acceptance of an application for regulatory approval in Europe of ridaforolimus for the sarcoma indication. Total revenue in 2010 consisted of license and collaboration revenue of $174.5 million and service revenue of $4.5 million. License and collaboration revenue in 2010 included the $50 million up-front payment and a $12.8 million payment for our share of ridaforolimus costs incurred from January 1, 2010 to May 4, 2010 from Merck pursuant to the terms of the License Agreement. License and collaboration revenue in 2010 also included $111.5 million representing the recognition in 2010 of revenue deferred as of December 31, 2009 under our accounting for the Collaboration Agreement, which was recognized upon execution of the License Agreement. Service revenue of $4.5 million in the year ended December 31, 2010 consisted of transition services that we provided to Merck pursuant to the License Agreement.

We expect that our revenue in 2012 will be primarily dependent on the status of regulatory approvals for ridaforolimus which could result in milestone payments from Merck. Pursuant to the License Agreement, Merck has agreed to pay us up to $40 million associated with regulatory approvals of ridaforolimus for the sarcoma indication, consisting of $25 million for marketing approval in the United States, $10 million for approval to sell ridaforolimus in the European Union, including first pricing and reimbursement approval granted by a regulatory authority in any major European country or by the EMA, and $5 million for marketing approval of ridaforolimus in Japan. Merck submitted applications for approval of ridaforolimus in the United States and in Europe in 2011, which are currently under review. In addition, if ridaforolimus receives regulatory approval and Merck commences sales, we would also be entitled to receive tiered double-digit royalties on global net sales under the License Agreement, although in 2012 we do not expect such royalty revenue will be material to our results of operations. There can be no assurance that ridaforolimus will receive regulatory approval, or if it does, that it will be commercially successful.

***Operating Expenses***

*Research and Development Expenses*

Research and development expenses increased by $19.7 million, or 34 percent, to $77.7 million in 2011, compared to $58.0 million in 2010. The research and development process necessary to develop a pharmaceutical product for commercialization is subject to extensive regulation by numerous governmental authorities in the United States and other countries. This process typically takes years to complete and requires the expenditure of substantial resources. Current requirements include:

- preclinical toxicology, pharmacology and metabolism studies, as well as *in vivo* efficacy studies in relevant animal models of disease;
- manufacturing of drug product for preclinical studies and clinical trials and ultimately for commercial supply;
- submission of the results of preclinical studies and information regarding manufacturing and control and proposed clinical protocol to the U.S. Food and Drug Administration, or FDA, in an Investigational New Drug application, or IND (or similar filings with regulatory agencies outside the United States);
- conduct of clinical trials designed to provide data and information regarding the safety and efficacy of the product candidate in humans; and
- submission of all the results of testing to the FDA in a New Drug Application, or NDA (or similar filings with regulatory agencies outside the United States).

Upon approval by the appropriate regulatory authorities, including in some countries approval of product pricing, we may commence commercial marketing and distribution of the product.

We group our research and development, or R&D, expenses into two major categories: direct external expenses and all other R&D expenses. Direct external expenses consist of costs of outside parties to conduct laboratory studies, to develop manufacturing processes and manufacture product candidates, to

conduct and manage clinical trials and similar costs related to our clinical and preclinical studies. These costs are accumulated and tracked by product candidate. All other R&D expenses consist of costs to compensate personnel, to purchase lab supplies and services, to lease, operate and maintain our facility, equipment and overhead and similar costs of our research and development efforts. These costs apply to our clinical and preclinical candidates as well as our discovery research efforts. Direct external expenses are further categorized as costs for clinical programs and costs for preclinical programs. Preclinical programs include product candidates undergoing toxicology, pharmacology, metabolism and efficacy studies and manufacturing process development required before testing in humans can begin. Product candidates are designated as clinical programs once we have filed an IND with the FDA, or a similar filing with regulatory agencies outside the United States, for the purpose of commencing clinical trials in humans.

Our R&D expenses for 2011 as compared to 2010 were as follows:

| | Year ended December 31, | | Increase / |
|---|---|---|---|
| *In thousands* | 2011 | 2010 | (decrease) |
| Direct external expenses: | | | |
| Clinical programs | $ 34,612 | $ 21,721 | $ 12,891 |
| Preclinical programs | 1,900 | 1,048 | 852 |
| All other R&D expenses | 41,231 | 35,216 | 6,015 |
| | $ 77,743 | $ 57,985 | $ 19,758 |

In 2011, our clinical programs consisted of ponatinib, our pan BCR-ABL inhibitor, and AP26113, our ALK and EGFR inhibitor for which we filed an IND in June 2011 and commenced a Phase 1/2 clinical trial in the third quarter of 2011. In 2010, our clinical programs consisted of ponatinib and ridaforolimus which we licensed to Merck in May 2010. The direct external expenses for ridaforolimus in 2010 reflect our share of the global development costs of ridaforolimus, including our share of Merck's costs, pursuant to the cost-sharing arrangement of our collaboration with Merck in effect through May 4, 2010.

Direct external expenses for ponatinib were $32.4 million in 2011, an increase of $19.2 million as compared to 2010. The increase is due to an increase in clinical trial costs of $10.1 million, contract manufacturing costs of $5.4 million, and supporting non-clinical costs of $3.7 million. Clinical trials costs increased primarily due to increased enrollment and treatment of patients in our pivotal Phase 2 clinical trial offset in part by a decrease in costs of our Phase 1 clinical trial as treatment of patients and other activities in this trial have decreased over this time period. Contract manufacturing costs increased due primarily to the conduct of product and process development and qualification initiatives to support regulatory filings for this product candidate, as well as the production of ponatinib for use in our clinical trials. Supporting non-clinical costs increased due primarily to increased quality and stability studies and initiatives to develop and commercialize a companion diagnostic test to identify the T315I mutation of the BCR-ABL gene. We expect that our direct external expenses for ponatinib will increase in 2012 as we continue to treat patients in our ongoing Phase 1 and Phase 2 clinical trials, initiate additional clinical trials of this product candidate, conduct additional studies to support continued development of ponatinib, and prepare and potentially file applications for regulatory approval of this product candidate.

Direct external expenses for AP26113 were $4.1 million for the year ended December 31, 2011, of which $2.2 million were included in clinical programs and $1.9 million were included in preclinical programs in the table above reflecting the transfer of this program to a clinical development status in the third quarter of 2011. Direct external expenses for AP26113 were $1.0 million for the year ended December 31, 2010, which were entirely included in preclinical programs. The increase in expenses for AP26113 was due primarily to the initiation of our Phase 1/2 clinical trial for this product candidate in the third quarter of 2011 as well as on-going product and process development initiatives and production of AP26113 for use in clinical trials. We expect that our direct external expenses for AP26113 will increase in 2012 as we continue to enroll patients in our on-going clinical trial of this product candidate and conduct additional studies to support continued development of AP26113.

We incurred no expenses for the development of ridaforolimus in the year ended December 31, 2011, because Merck agreed to fund 100 percent of such costs pursuant to the License Agreement entered into in May 2010. Direct external expenses for ridaforolimus amounted to $8.5 million in 2010, reflecting our share of the costs of global development of this product candidate with Merck, including our share of Merck's costs, pursuant to the cost-sharing arrangement of our collaboration with Merck in effect through May 4, 2010.

All other R&D expenses increased by $6.0 million in 2011 as compared to 2010. This increase is primarily due to a decrease of $3.3 million in Merck's reimbursement to us for our services pursuant to the Collaboration Agreement in effect until May 2010, an increase in professional services of $1.3 million due primarily to initiatives to upgrade systems and technology used in our business, an increase in stock-based compensation expense of $1.4 million as a result of the impact of a significant increase in the market value of our common stock on the value of stock-based awards in 2011, an increase in rent expense of $1.6 million as a result of our amendment to our building lease and an increase in other expenses as a result of a one-time credit received in 2010 of $733,000 related to grants awarded to us by the Internal Revenue Service under the Qualified Therapeutic Discovery Project, or QTDP, program established by the U.S. Congress in March 2010 as part of the Patient Protection and Affordable Care Act. These increases were offset in part by a decrease in other personnel costs of $1.1 million due to a lower average number of employees in 2011 as compared to 2010 and a decrease in expenses related to our intellectual property, primarily due to a decrease in impairment charges of $2.1 million as we reserved or wrote off the carrying value of patents related to our NF-κB and ARGENT technologies in 2010. We expect that all other R&D expenses will increase in 2012 to support the expanding development of ponatinib and AP26113, the preparation and potential filing of world-wide regulatory filings for ponatinib, and our ongoing discovery research efforts.

The successful development of our product candidates is uncertain and subject to a number of risks. We cannot be certain that any of our product candidates will prove to be safe and effective or will meet all of the applicable regulatory requirements needed to receive and maintain marketing approval. Data from preclinical studies and clinical trials are susceptible to varying interpretations that could delay, limit or prevent regulatory approval. We, the FDA or other regulatory authorities may suspend clinical trials at any time if we or they believe that the subjects participating in such trials are being exposed to unacceptable risks or if such regulatory agencies find deficiencies in the conduct of the trials or other problems with our products under development. Delays or rejections may be encountered based on additional governmental regulation, legislation, administrative action or changes in FDA or other regulatory policy during development or the review process. Other risks associated with our product development programs are described in the section entitled "Risk Factors" in Part I, Item 1A of this annual report.

*General and Administrative Expenses*

General and administrative expenses increased by $8.3 million, or 52 percent, from $16.1 million in 2010 to $24.4 million in 2011. This increase was due primarily to an increase in professional services of $5.3 million as a result of an increase in corporate and commercial development initiatives to plan and prepare for the potential commercial launch of ridaforolimus and ponatinib, an increase in stock-based compensation expense of $1.4 million due to the impact of a significant increase in the market value of our common stock on the value of stock-based compensation awards in 2011, a decrease of $452,000 in Merck's reimbursement to us for our services pursuant to the Collaboration Agreement in effect until May 2010, as well as an increase in costs to recruit personnel, travel costs and other miscellaneous costs. We expect that general and administrative expenses will increase in 2012 as we prepare for potential commercial launch of ponatinib in the United States and in Europe, including the hiring of sales, marketing and commercial operations personnel and the establishment of our European headquarters and operations, and support our expanding research and development activities.

We expect that our operating expenses in total will increase substantially in 2012 for the reasons described above. Operating expenses may fluctuate from quarter to quarter. The actual amount of any increase in operating expenses will depend on, among other things, the status of regulatory reviews and timing of potential regulatory approvals of our product candidates, the costs to prepare for potential commercial launch of ponatinib in the United States and in Europe, the progress of our product development programs, including on-going and planned clinical trials, results of continuing non-clinical studies and the costs of product and process development activities and product manufacturing.

***Other Income/Expense***

*Interest Income*

Interest income increased by 94 percent to $167,000 in 2011 from $86,000 in 2010, as a result of a higher average balance of funds invested in 2011.

*Interest Expense*

Interest expense increased by 13 percent to $232,000 in 2011 from $206,000 in 2010, due to higher average borrowings in 2011.

*Revaluation of Warrant Liability*

The fair value of our warrant liability at December 31, 2011 was $29.8 million higher than its fair value at December 31, 2010, due to the net impact of the exercise of warrants to purchase 3,757,767 shares of our common stock during 2011 and the revaluation of our warrant liability at December 31, 2011. The revaluation of our warrant liability resulted in a non-cash charge of $46.7 million for the year ended December 31, 2011 and was due primarily to increases in the market price of our common stock from $5.10 per share at December 31, 2010, to $12.25 per share at December 31, 2011. The revaluation of our warrant liability in 2010 resulted in a non-cash charge of $19.5 million for the year ended December 31, 2010. Increases in our stock price during January and February 2012, during which time all remaining warrants were exercised, will result in additional charges to be reported in our consolidated statement of operations in the first quarter of 2012. Such charges will not have any impact on our cash balances, current liquidity or cash flows. Upon the exercise of those remaining warrants, the balance of the warrant liability was credited to stockholders' equity and the liability was eliminated.

***Operating Results***

We reported a loss from operations of $76.8 million in 2011 compared to income from operations of $104.9 million in 2010, an increase in loss of $181.7 million. This change is due primarily to the decrease in revenue as a result of the accounting impact of the License Agreement entered into with Merck in May 2010 and the increase in operating expenses discussed above. We also reported a net loss of $123.6 million in 2011 compared to net income of $85.2 million in 2010, an increase in net loss of $208.8 million reflecting the change in loss from operations noted above plus the revaluation of the warrant liability. We expect that our loss from operations will increase in 2012 due to expected increases in research and development expenses and general and administrative expenses as described above. Our actual results of operations for 2012 will depend on a number of factors, including the status of regulatory reviews and timing of potential regulatory approvals of our product candidates, the costs to prepare for potential commercial launch of ponatinib in the United States and in Europe, the progress of our product development programs, the progress of our discovery research programs, the receipt of milestone payments, the exercise of warrants, and changes in the valuation of our warrant liability, among other factors. The extent of operating losses in future years may also depend on the sufficiency of funds on hand or available from time to time, which will influence the amount we will spend on operations and capital expenditures as well as the development timelines for our product candidates.

*Years Ended December 31, 2010 and 2009*

*Revenue*

We recorded total revenue of $179.0 million for the year ended December 31, 2010, compared to $8.3 million for the year ended December 31, 2009. Total revenue in 2010 consisted of license and collaboration revenue of $174.5 million and service revenue of $4.5 million. License and collaboration revenue in 2010 included the $50 million up-front payment and a $12.8 million payment for our share of ridaforolimus costs incurred from January 1, 2010 to May 4, 2010 from Merck pursuant to the terms of the License Agreement. License and collaboration revenue in 2010 also included $111.5 million representing the recognition in 2010 of revenue deferred as of December 31, 2009 under our accounting for the Collaboration Agreement, which was recognized upon execution of the License Agreement. Service revenue of $4.5 million in the year ended December 31, 2010 consisted of transition services that we provided to Merck pursuant to the terms of the License Agreement.

*Operating Expenses*

*Research and Development Expenses*

Research and development expenses decreased by $5.4 million, or 9 percent, to $58.0 million in 2010, compared to $63.4 million in 2009.

Our R&D expenses for 2010 as compared to 2009 were as follows:

| | Year ended December 31, | | Increase / |
|---|---|---|---|
| *In thousands* | 2010 | 2009 | (decrease) |
| Direct external expenses: | | | |
| Clinical programs | $ 21,721 | $ 35,406 | $ (13,685) |
| Preclinical programs | 1,048 | 61 | 987 |
| All other R&D expenses | 35,216 | 27,980 | 7,236 |
| | $ 57,985 | $ 63,447 | $ (5,462) |

In 2010 and 2009, our clinical programs consisted of ridaforolimus and ponatinib. The direct external expenses for ridaforolimus reflect our share of the global development costs of ridaforolimus, including our share of Merck's costs, pursuant to the cost-sharing arrangement of our collaboration with Merck in effect through May 4, 2010.

Direct external expenses for ponatinib were $13.2 million in 2010, an increase of $7.7 million compared to 2009. The increase was due to an increase in contract manufacturing costs of $3.6 million, clinical trial costs of $5.7 million and supporting non-clinical costs of $482,000, offset in part by a decrease in toxicology costs of $2.1 million. Toxicology costs decreased due to the completion in 2009 of long-term toxicology studies necessary to support development of this product candidate. Clinical trials costs increased due to continued enrollment and treatment of patients in our Phase 1 clinical trial as well as preparation for and initiation of enrollment of patients in our pivotal Phase 2 clinical trial. Contract manufacturing costs increased due to continuing product and process development initiatives as well as the production of ponatinib for use in these clinical trials.

Direct external expenses for ridaforolimus were $8.5 million in 2010, a decrease of $21.5 million, compared to 2009. The decrease was primarily due to the restructuring of our collaboration with Merck, under which Merck is responsible for and funds 100 percent of the cost of ridaforolimus from May 4, 2010. Therefore, our expenses during 2010 reflected our share of ridaforolimus costs from January 1, 2010 to May 4, 2010, including our share of Merck's costs, pursuant to the cost-sharing arrangement of our collaboration with Merck in effect through May 4, 2010, compared to a full twelve months in the year ended December 31, 2009.

Direct external expenses for our preclinical program were $1.0 million in 2010, an increase of $987,000, compared to 2009. This increase in expenses was related to manufacturing and other IND-enabling studies for AP26113.

All other R&D expenses increased by $7.2 million in 2010 as compared to 2009. This increase was due in part to the termination in 2010 of the cost-sharing provisions for ridaforolimus under our Collaboration Agreement with Merck. In 2010, we received $6.1 million less in reimbursement from Merck than in 2009 for its share of our internal costs charged to Merck pursuant to the Collaboration Agreement. This reimbursement provision ended effective May 4, 2010 with the execution of the License Agreement under which we invoiced Merck for our services and recorded such amounts as service revenue during the balance of 2010. The increase was also due to an increase of $2.1 million in expenses related to intellectual property protection of our R&D programs, primarily due to reserves for and write-offs of certain technologies. These increases were offset in part by a credit of $733,000 related to grants awarded to us by the Internal Revenue Service under the Qualified Therapeutic Discovery Project, or QTDP, program established by the U.S. Congress in March 2010 as part of the Patient Protection and Affordable Care Act. This credit was recorded as an offset to the related R&D expenses.

*General and Administrative Expenses*

General and administrative expenses decreased by $793,000, or 5 percent, from $16.9 million in 2009 to $16.1 million in 2010. This decrease was due primarily to a decrease in professional services of $1.9 million related primarily to a reduction in corporate and commercial development initiatives and legal fees for patent litigation. This decrease was partially offset by an increase in personnel expenses of $660,000 due to salary increases and annual performance awards, an increase in overhead and other expenses of $193,000, and a decrease of $97,000 in reimbursement from Merck for its share of our internal costs charged to Merck pursuant to the Collaboration Agreement.

***Other Income/Expense***

*Interest Income*

Interest income decreased by 26 percent to $86,000 in 2010 from $116,000 in 2009, as a result of lower interest yields from our invested funds, offset in part by a higher average balance of funds invested in 2010.

*Interest Expense*

Interest expense decreased by 28 percent to $206,000 in 2010 from $287,000 in 2009, due to lower average loan balances and lower interest rates in 2010.

*Revaluation of Warrant Liability*

The fair value of our warrant liability at December 31, 2010 was $17.5 million higher than its fair value at December 31, 2009, due to the net impact of the exercise of warrants to purchase 1,220,414 shares of our common stock in the second quarter of 2010 and the revaluation of our warrant liability at December 31, 2010. The revaluation of our warrant liability resulted in a non-cash charge of $19.5 million for the year ended December 31, 2010 and was due primarily to increases in the market price of our common stock since December 31, 2009. The revaluation of our warrant liability in 2009 resulted in a non-cash charge of $7.8 million for the year ended December 31, 2009.

*Operating Results*

We reported income from operations of $104.9 million in 2010 compared to a loss from operations of $72.0 million in 2009, an increase in income of $176.9 million. The increase in income from operations was primarily due to the recognition of approximately $174 million in license and collaboration revenue as a result of the accounting impact of the License Agreement entered into with Merck in May 2010, and a decrease in our share of the costs of development of ridaforolimus. We also reported net income of $85.2 million in 2010 compared to a net loss of $80.0 million in 2009, an increase in net income of $165.2 million. The increase in income was largely due to the impact of the License Agreement with Merck, offset in part by the revaluation of our warrant liability described above.

**Selected Quarterly Financial Data**

Summarized unaudited quarterly financial data are as follows:

| | 2011 | | | |
|---|---|---|---|---|
| *In thousands, except per share amounts* | First | Second | Third | Fourth |
| Total revenue [1] | $ 56 | $ 66 | $ 25,101 | $ 78 |
| Net income (loss) | (37,949) | (47,762) | 13,910 | (51,802) |
| Net income (loss) per share – basic | (0.29) | (0.36) | 0.10 | (0.38) |
| – diluted | (0.29) | (0.36) | 0.10 | (0.38) |

| | 2010 | | | |
|---|---|---|---|---|
| *In thousands, except per share amounts* | First | Second | Third | Fourth |
| Total revenue [2] | $ 2,154 | $ 175,049 | $ 1,242 | $ 535 |
| Net income (loss) | (23,398) | 159,348 | (20,400) | (30,302) |
| Net income (loss) per share – basic | (0.21) | 1.44 | (0.18) | (0.25) |
| – diluted | (0.21) | 1.35 | (0.18) | (0.25) |

[1] In the third quarter of 2011, we earned a $25 million milestone payment from Merck as described in Note 2 to the consolidated financial statements.

[2] In May 2010, we entered into an amended and restated agreement with Merck for the development and commercialization of ridaforolimus that provided for an up-front payment of $50 million and resulted in the recognition at that time of previously deferred revenue. See Note 2 to the consolidated financial statements.

**Liquidity and Capital Resources**

We have financed our operations and investments to date primarily through sales of our common stock in public and private offerings, through the receipt of up-front and milestone payments from collaborations and licenses with pharmaceutical and biotechnology companies and, to a lesser extent, through issuances of our common stock pursuant to our stock option and employee stock purchase plans, supplemented by the borrowing of long-term debt from commercial lenders. We sell securities and incur debt when the terms of such transactions are deemed favorable to us and as necessary to fund our current and projected cash needs. We seek to balance the level of cash, cash equivalents and marketable securities on hand with our projected needs and to allow us to withstand periods of uncertainty relative to the availability of funding on favorable terms.

*Sources of Funds*

During the years ended December 31, 2011, 2010 and 2009, our sources of funds were as follows:

| *In thousands* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Sales/issuances of common stock: | | | |
| In common stock offerings | $ 243,058 | $ 57,515 | $ 58,370 |
| Upon exercise of warrants | 8,080 | 2,624 | --- |
| Pursuant to stock option and employee stock purchase plans | 4,791 | 789 | 568 |
| Proceeds from long-term borrowings | 4,375 | --- | --- |
| Up-front and milestone payments from Merck, included in cash provided by (used in) operating activities | 25,000 | 50,000 | --- |
| | $ 285,304 | $ 110,928 | $ 58,938 |

Our up-front and milestone payments from Merck were received pursuant to the License Agreement entered into in May 2010. These payments are included in cash provided by (used in) operating activities in our consolidated statement of cash flows for the years ended December 31, 2011 and 2010 but are presented separately in this analysis due to the non-recurring nature of these payments.

The amount of funding we seek to raise through sales of our common stock or other securities depends on many factors, including, but not limited to, our plans for and the expected costs of the potential commercialization of our product candidates, the status and progress of our product development programs and potential regulatory approvals, the receipt of potential milestone payments and royalties from Merck, projected cash needs, availability of funding from other sources, our stock price and the status of the capital markets.

On February 25, 2009, we sold 14,378,698 shares of our common stock in a registered direct offering to institutional investors, at a purchase price of $1.69 per share, resulting in net proceeds after fees and expenses of $22.8 million. The investors also received warrants to purchase an additional 10,784,024 shares of our common stock exercisable at a price of $2.15 per share in cash or pursuant to the net exercise provisions of the warrants. The warrants became exercisable on August 25, 2009 and expired on February 25, 2012. In the year ended December 31, 2010, 1,220,414 warrants were exercised for proceeds to us of $2.6 million. In the year ended December 31, 2011, 3,757,767 warrants were exercised for proceeds to us of approximately $8.1 million. Prior to exercise, the warrants were recorded at fair value, with the adjustment to carrying value recognized in earnings upon exercise. The sum of the fair value of the exercised warrants and the proceeds received were credited to additional paid-in-capital and totaled $25.0 million and $4.7 million for the years ended December 31, 2011 and 2010, respectively. At December 31, 2011, there were 5,805,843 warrants outstanding which were exercised in January and February 2012 for proceeds to us of approximately $12.5 million.

On August 7, 2009, we sold 21,850,000 shares of our common stock in an underwritten public offering, including 2,850,000 shares of common stock upon exercise by the underwriters of their over-allotment option, at a purchase price of $1.75 per share. Net proceeds of this offering, after underwriting discounts and commissions and direct expenses, were $35.6 million.

On October 29, 2010, we sold 16,000,000 shares of our common stock in an underwritten public offering at a purchase price of $3.70 per share. Net proceeds of this offering, after underwriting discounts and commissions and expenses, were approximately $57.5 million.

On December 20, 2011, we sold 24,725,000 shares of our common stock in an underwritten public offering at a purchase price of $10.42 per share. Net proceeds of this offering, after underwriting discounts and commissions and expenses, were approximately $243.1 million.

We have filed shelf registration statements with the U.S. Securities and Exchange Commission, or SEC, from time to time, to register shares of our common stock or other securities for sale, giving us the opportunity to raise funding when needed or otherwise considered appropriate. Under SEC rules, we currently qualify as a "well-known seasoned issuer," which allows us to file shelf registration statements to register an unspecified amount of securities that are effective upon filing. On December 14, 2011, we filed such a shelf registration statement with the SEC for the issuance of an unspecified amount of common stock, preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in units, from time to time at prices and on terms to be determined at the time of any such offering. This filing was effective upon filing and will remain in effect for up to three years from filing. In addition, before we qualified as a "well-known seasoned issuer," we filed a shelf registration statement for various classes of securities under which we have approximately $65.8 million of securities remaining available for issuance prior to January 21, 2013.

In January 2011, we amended our existing term loan with a bank. The amendment increased the outstanding balance of the loan from $9.6 million at December 31, 2010 to $14.0 million, extends the maturity date from March 31, 2013 to December 31, 2015, and re-sets the quarterly repayment provisions, with payments increasing from 2.5 percent of the principal amount in the first quarter, commencing on March 31, 2011, to 8.75 percent of the principal amount in the final quarter, together with interest throughout the term of the loan. All other provisions of our existing loan remain in full force and effect.

*Uses of Funds*

The primary uses of our cash are to fund our operations and working capital requirements and, to a lesser degree, to repay our long-term debt, to invest in intellectual property and to invest in property and equipment as needed for our business. Our uses of cash during the years ended December 31, 2011, 2010 and 2009 were as follows:

| *In thousands* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Net cash used in (provided by) operating activities | $ 53,262 | $ (6,418) | $ 51,904 |
| Adjusted for up-front and milestone payments from Merck | 25,000 | 50,000 | --- |
| Adjusted net cash used in (provided by) operating activities | 78,262 | 43,582 | 51,904 |
| Repayment of long-term borrowings and capital leases | 1,466 | 2,043 | 1,487 |
| Investment in intangible assets | 671 | 691 | 1,308 |
| Investment in property and equipment | 1,452 | 1,344 | 2,198 |
| Payment of tax withholding obligations related to stock compensation | 827 | --- | --- |
| | $ 82,678 | $ 47,660 | $ 56,897 |

The net cash used in (provided by) operating activities is comprised of our net income (losses), adjusted for non-cash expenses, changes in deferred revenue, including any required deferrals of the up-front and milestone payments received from licenses, and working capital requirements. As noted above, our net loss for the year ended December 31, 2011 increased by $208.9 million, as compared to 2010, due in large part to the accounting impact of the License Agreement entered into with Merck in May 2010, which triggered the acceleration of the recognition of $111.5 million of previously deferred revenue as income in 2011, and the revaluation of our warrant liability. After taking into account these non-cash items, and after adjusting for the $50 million up-front payment in 2010 and $25 million milestone payment in 2011 from Merck pursuant to the License Agreement, our adjusted net cash used in operating activities increased by $34.7 million in 2011 compared to 2010. These changes reflect overall increases in operating expenses of $28.0 million and changes in working capital. As noted above, we expect that we will incur a net loss in 2012 due to ongoing development of our product candidates and preparation for potential commercialization of our product candidates in the United States and Europe; that our investment in intangible assets, consisting of our intellectual property, will increase in 2012 in support of our product

development and commercialization activities; and that our investment in property and equipment will increase in 2012 to support growth of our R&D and general and administrative functions.

**Off-Balance Sheet Arrangements**

As part of our ongoing business, we do not participate in transactions that generate relationships with unconsolidated entities for financial partnerships, such as entities often referred to as structured finance or special purpose entities which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As of December 31, 2011, we maintained outstanding letters of credit of $749,000 in accordance with the terms of our long-term lease for our office and laboratory facility and for other purposes.

**Contractual Obligations**

We have substantial fixed contractual obligations under our long-term debt agreement, operating and capital lease agreements, employment agreements and benefit plans. These non-cancellable contractual obligations were comprised of the following as of December 31, 2011:

| | | Payments Due By Period | | | |
|---|---|---|---|---|---|
| *In thousands* | Total | In 2012 | 2013 through 2015 | 2016 through 2017 | After 2017 |
| Long-term debt | $ 12,600 | $ 1,400 | $ 11,200 | $ --- | $ --- |
| Leases | 39,190 | 3,372 | 15,796 | 11,023 | 8,999 |
| Employment agreements | 4,499 | 3,046 | 1,453 | --- | --- |
| Other long-term obligations | 5,893 | 1,032 | 4,861 | --- | --- |
| | $ 62,182 | $ 8,850 | $ 33,310 | $ 11,023 | $ 8,999 |

Long-term debt consists of scheduled principal payments on such debt. Interest on our long-term debt is based on variable interest rates. Assuming a constant interest rate of 1.79 percent, our average interest rate on our debt at December 31, 2011, over the remaining term of the debt, our interest expense would total approximately $213,000 in 2012 and $371,000 in the period 2013 through 2015.

Leases consist of payments to be made on our lease for our office and laboratory facility, the term of which extends to July 2019, and on agreements for certain assets acquired under capital leases which expire at various dates into 2013. Employment agreements represent base salary payments under agreements with officers that extend for fixed terms ranging from one to two years. Other long-term obligations are comprised primarily of our obligations under our executive deferred compensation plan.

**Liquidity**

At December 31, 2011, we had cash and cash equivalents totaling $306.3 million and working capital of $282.2 million, compared to cash and cash equivalents totaling $103.6 million and working capital of $88.8 million at December 31, 2010. In addition, at December 31, 2011, we had warrants outstanding to purchase 5,805,843 shares of our common stock from our registered direct offering of common stock in February 2009, which were exercised in January and February 2012 for approximately $12.5 million in gross proceeds. For the year ended December 31, 2011, we reported a net loss of $123.6 million and cash used in operating activities of $53.3 million. Based on our current operating plan, we believe that our cash and cash equivalents at December 31, 2011, together with the proceeds of warrant exercises received in 2012 and anticipated milestones and royalty payments from Merck assuming regulatory approval of ridaforolimus, will be sufficient to fund our operations to the end of 2013.

We do not have significant recurring revenue streams and have historically incurred operating losses and net losses related to our research and development activities. We expect to continue to incur significant operating expenses and that our operating expenses will increase substantially in 2012 and beyond. We

plan to expand our development of our product candidates, ponatinib and AP26113, and will conduct additional clinical trials and continue manufacturing-related and other activities in support of these efforts. Subject to our filing for and receipt of marketing approval, we plan to commercialize ponatinib and future product candidates on our own in the United States, Europe and other select markets worldwide, which will require increased spending to establish sales, marketing and distribution capabilities in these markets. We also plan to continue to invest in discovery research and add to our pipeline of product candidates through these activities. There are many factors that will affect our level of spending on these activities including the number, size and complexity of, and rate of enrollment of patients in, our clinical trials for ponatinib and AP26113, the extent of other development activities for ponatinib and AP26113, including product and process development, the progress of our preclinical and discovery research programs, the status of regulatory reviews and timing of potential regulatory approvals, in the United States, Europe and other markets of ponatinib, ridaforolimus and other product candidates, the size of the workforce and required systems and infrastructure necessary to support commercialization of our product candidates in multiple markets and other factors.

We currently have no drug products approved for sale. Until such time, if ever, that we receive regulatory approval for our product candidates and generate significant revenues from sales of our product candidates, we plan to continue to fund our operations through the potential receipt of milestone payments under our existing licenses by issuing common stock, debt or other securities in public or private offerings, or by incurring additional debt from commercial lenders. Under our license agreement with Merck, we will be eligible to receive up to $40 million in additional milestone payments related to the sarcoma indication (consisting of $25 million for marketing approval in the United States, $10 million for approval to sell ridaforolimus in the European Union, including first pricing and reimbursement approval granted by a regulatory authority in any major European country or by the EMA, and $5 million for marketing approval in Japan). In addition to milestone payments, if ridaforolimus receives regulatory approval, Merck has agreed to pay us tiered double-digit royalties on global net sales of ridaforolimus. We have also exercised our option to co-promote ridaforolimus with Merck in the United States, subject to the terms of a co-promotion agreement being negotiated by the parties, pursuant to which Merck will reimburse us for our sales efforts.

In addition to the License Agreement with Merck, we also have existing License Agreements with two companies, Medinol Ltd. and ICON Medical Corporation, for the development and commercialization of ridaforolimus-eluting stents, and other licenses of our ARGENT technology. If Medinol, ICON or the other licensees are successful in the development or commercialization of potential products or otherwise generate revenue from these licenses, we will be eligible to receive milestone payments and/or royalties on sales of products.

We may also seek to raise funds by issuing common stock, debt or other securities in one or more public or private offerings, as market conditions permit, or through the incurrence of additional debt from commercial lenders. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our existing stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends.

There can be no assurance that additional funds will be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to: (1) delay, limit, reduce or terminate preclinical studies, clinical trials or other clinical development activities for one or more of our product candidates; (2) delay, limit, reduce or terminate our discovery research or preclinical development activities; or (3) delay, limit, reduce or terminate our establishment of sales and marketing capabilities or other activities that may be necessary to commercialize our product candidates.

**Recently Adopted or Issued Accounting Pronouncements**

In April 2010, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2010-17, *Revenue Recognition – Milestone Method*, which provides guidance on determining whether a milestone is substantive including the criteria that must be met for a milestone to be considered a substantive milestone and the recognition of consideration received upon achievement of a substantive milestone. ASU No. 2010-17 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after June 15, 2010. We adopted this ASU on January 1, 2011 with no material impact on our financial statements.

In October 2009, the FASB issued authoritative guidance that modifies the accounting for multiple element revenue arrangements. This guidance requires an entity to allocate revenue to each unit of accounting in multiple deliverable arrangements based on the relative selling price of each deliverable. It also changes the level of evidence of stand-alone selling prices required to separate deliverables by requiring an entity to make its best estimate of the stand-alone selling price of the deliverables when more objective evidence of selling price is not available. This guidance is effective for fiscal years beginning after June 15, 2010 and may be applied prospectively to new or materially modified arrangements after the effective date or retrospectively. We adopted this guidance on January 1, 2011 and although the adoption did not materially impact our financial condition, results of operations, or cash flows, this guidance may impact our determination of the separation of deliverables for future arrangements.

In June 2011, the FASB issued ASU No. 2011-05, *Presentation of Comprehensive Income*, which eliminates the presentation options currently in Accounting Standards Codification ("ASC") Topic 220 and requires the presentation of other comprehensive income in either a continuous statement of comprehensive income or in two separate but consecutive statements. ASU No. 2011-05 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2011 and requires retrospective application. This guidance will require a change in the presentation of our financial statements, however, we do not believe that it will have a material impact unless we have components of other comprehensive income other than net income (loss).

## ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We invest our available funds in accordance with our investment policy to preserve principal, maintain proper liquidity to meet operating needs and maximize yields. Our investment policy specifies credit quality standards for our investments and limits the amount of credit exposure to any single issue, issuer or type of investment.

When we conclude that cash balances will be invested, we invest in short-term, highly liquid securities, with original maturities of 90 days or less, and money market accounts. Depending on our level of available funds and our expected cash requirements, we may invest a portion of our funds in marketable securities, consisting generally of corporate debt and U.S. government and agency securities. Maturities of our marketable securities are generally limited to periods necessary to fund our liquidity needs and may not in any case exceed three years.

Our investments are sensitive to interest rate risk. However, because our available funds at December 31, 2011, were invested solely in cash and cash equivalents, our risk of loss due to changes in interest rates is not material.

At December 31, 2011, we have recorded as a liability the fair value of warrants to purchase 5,805,843 shares of our common stock issued to investors in connection with a registered direct offering of our common stock on February 25, 2009. The fair value of this warrant liability is sensitive to changes in the market price and volatility of our common stock among other factors. In the event of a hypothetical 10% increase in the market price ($1.23 based on the market price of our stock at December 31, 2011) of our

common stock on which the December 31, 2011 valuation was based, the value would have increased by up to $7.1 million. Such increase would have been reflected as additional loss on revaluation of the warrant liability in our statement of operations.

At December 31, 2011, we had $12.6 million outstanding under a bank term note which bears interest at prime or, alternatively, LIBOR plus 1.25 to 2.25 percent. This note is sensitive to changes in interest rates. In the event of a hypothetical 10 percent increase in the interest rate on which the loan is based (18 basis points at December 31, 2011), we would incur approximately $21,000 of additional interest expense per year based on expected balances over the next twelve months.

**Certain Factors That May Affect Future Results of Operations**

The SEC encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Annual Report on Form 10-K contains such "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this Annual Report, and they may also be made a part of this Annual Report by reference to other documents filed with the SEC, which is known as "incorporation by reference." Such statements in connection with any discussion of future operating or financial performance are identified by use of words such as "may," "anticipate," "estimate," "expect," "project," "intend," "plan," "believe," and other words and terms of similar meaning. Such statements are based on management's expectations and are subject to certain factors, risks and uncertainties that may cause actual results, outcome of events, timing and performance to differ materially from those expressed or implied by such forward-looking statements. These risks include, but are not limited to, preclinical data and early-stage clinical data that may not be replicated in later-stage clinical studies; the costs associated with our research, development, manufacturing and other activities, the conduct and results of preclinical and clinical studies of our product candidates, difficulties or delays in obtaining regulatory approvals to market products resulting from our or our partners' development efforts; the timing of development and potential market opportunity for our product candidates; our ability to establish sales, marketing and distribution capabilities to support the planned commercialization of our product candidates; our reliance on our strategic partners and licensees and other key parties for the successful development, manufacturing and commercialization of our product candidates; the adequacy of our capital resources and the availability of additional funding; patent protection and third-party intellectual property claims relating to our and our partners' product candidates; future capital needs; risks related to key employees, markets, economic conditions, prices, reimbursement rates and competition; and other factors. Please also see the discussion under "Risk Factors" in Part I, Item 1A appearing elsewhere in this Annual Report on Form 10-K for more details regarding these and other risks.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this Annual Report or in any document incorporated by reference might not occur. Stockholders are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this report or the date of the document incorporated by reference in this Annual Report. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

## ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

### Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
ARIAD Pharmaceuticals, Inc.
Cambridge, Massachusetts

We have audited the accompanying consolidated balance sheets of ARIAD Pharmaceuticals, Inc. and subsidiaries (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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, such consolidated financial statements present fairly, in all material respects, the financial position of ARIAD Pharmaceuticals, Inc. and subsidiaries as of December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011, in conformity with accounting principles generally accepted in the United States of America.

We have also 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, 2011, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 29, 2012 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
February 29, 2012

## ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
## CONSOLIDATED BALANCE SHEETS

| *In thousands, except share and per share data* | December 31, 2011 | December 31, 2010 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 306,256 | $ 103,630 |
| Amounts due under license agreements (Note 2) | 34 | 407 |
| Other current assets | 1,277 | 1,135 |
| Total current assets | 307,567 | 105,172 |
| Restricted cash | 749 | 749 |
| Property and equipment, net (Note 3) | 6,611 | 7,037 |
| Intangible and other assets, net (Note 4) | 5,785 | 7,072 |
| Total assets | $ 320,712 | $ 120,030 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities: | | |
| Accounts payable | $ 5,728 | $ 3,122 |
| Current portion of long-term debt and capital lease obligations (Note 5) | 1,454 | 1,466 |
| Accrued compensation and benefits | 1,209 | 1,127 |
| Accrued product development expenses | 11,948 | 8,189 |
| Other accrued expenses | 3,634 | 1,664 |
| Current portion of deferred executive compensation (Note 6) | 1,032 | 693 |
| Current portion of deferred revenue | 231 | --- |
| Other current liabilities | 136 | 136 |
| Total current liabilities | 25,372 | 16,397 |
| Long-term debt and capital lease obligations (Note 5) | 11,215 | 8,294 |
| Other long-term liabilities | 1,854 | 330 |
| Deferred revenue | 768 | --- |
| Deferred executive compensation (Note 6) | 2,723 | 2,118 |
| Warrant liability (Notes 8 and 9) | 58,639 | 28,815 |
| Commitments (Note 7) | | |
| Stockholders' equity (Notes 8, 10 and 11): | | |
| Preferred stock, $.01 par value, authorized 10,000,000 shares, none issued and outstanding | | |
| Common stock, $.001 par value, authorized 240,000,000 shares in 2011 and 2010; shares issued and outstanding 157,608,702 shares in 2011, 126,942,431 shares in 2010 | 158 | 127 |
| Additional paid-in capital | 776,946 | 497,309 |
| Accumulated deficit | (556,963) | (433,360) |
| Total stockholders' equity | 220,141 | 64,076 |
| Total liabilities and stockholders' equity | $ 320,712 | $ 120,030 |

See notes to consolidated financial statements.

## ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
## CONSOLIDATED STATEMENTS OF OPERATIONS

| *In thousands, except per share data* | Years Ended December 31, 2011 | 2010 | 2009 |
|---|---|---|---|
| License and collaboration revenue (Note 2) | $ 25,189 | $ 174,460 | $ 8,302 |
| Service revenue | 111 | 4,520 | --- |
| Total revenue | 25,300 | 178,980 | 8,302 |
| Operating expenses: | | | |
| Research and development | 77,743 | 57,985 | 63,447 |
| General and administrative | 24,380 | 16,095 | 16,888 |
| Total operating expenses | 102,123 | 74,080 | 80,335 |
| Income (loss) from operations | (76,823) | 104,900 | (72,033) |
| Other income (expense): | | | |
| Interest income | 167 | 86 | 116 |
| Interest expense | (232) | (206) | (287) |
| Revaluation of warrant liability | (46,715) | (19,532) | (7,804) |
| Other income (expense), net | (46,780) | (19,652) | (7,975) |
| Net income (loss) | $ (123,603) | $ 85,248 | $ (80,008) |
| Net income (loss) per share - basic | $ (0.93) | $ 0.75 | $ (0.86) |
| - diluted | $ (0.93) | $ 0.74 | $ (0.86) |
| Weighted-average number of shares of common stock outstanding - basic | 132,375 | 113,020 | 93,330 |
| - diluted | 132,375 | 114,734 | 93,330 |

See notes to consolidated financial statements.

## ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

| *In thousands, except share data* | Common Stock Shares | Common Stock Amount | Additional Paid-in Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Stockholders' Equity (Deficit) |
|---|---|---|---|---|---|---|
| Balance, January 1, 2009 | 71,365,339 | $ 71 | $ 369,313 | $ 18 | $ (438,600) | $ (69,198) |
| Issuance of shares pursuant to ARIAD stock plans | 995,893 | 1 | 567 | | | 568 |
| Issuance of shares to minority shareholders of AGTI | 452,852 | 1 | 473 | | | 474 |
| Issuance of common stock, net of issuance costs | 36,228,698 | 36 | 58,334 | | | 58,370 |
| Issuance of warrants | | | (3,559) | | | (3,559) |
| Stock-based compensation | | | 4,355 | | | 4,355 |
| Comprehensive loss: | | | | | | |
| Net loss | | | | | (80,008) | (80,008) |
| Net unrealized losses on marketable securities | | | | (18) | | (18) |
| Total comprehensive loss | | | | | | $ (80,026) |
| Balance, December 31, 2009 | 109,042,782 | 109 | 429,483 | --- | (518,608) | (89,016) |
| Issuance of shares pursuant to ARIAD stock plans | 679,235 | 1 | 788 | | | 789 |
| Issuance of common stock, net of issuance costs | 16,000,000 | 16 | 57,499 | | | 57,515 |
| Issuance of common stock from warrant exercise | 1,220,414 | 1 | 4,703 | | | 4,704 |
| Stock-based compensation | | | 4,836 | | | 4,836 |
| Comprehensive income: | | | | | | |
| Net income | | | | | 85,248 | 85,248 |
| Total comprehensive income | | | | | | $ 85,248 |
| Balance, December 31, 2010 | 126,942,431 | 127 | 497,309 | --- | (433,360) | 64,076 |
| Issuance of shares pursuant to ARIAD stock plans | 2,183,504 | 2 | 4,789 | | | 4,791 |
| Issuance of common stock, net of issuance costs | 24,725,000 | 25 | 243,033 | | | 243,058 |
| Issuance of common stock from warrant exercise | 3,757,767 | 4 | 24,967 | | | 24,971 |
| Stock-based compensation | | | 7,675 | | | 7,675 |
| Payments of tax withholding obligations related to stock compensation | | | (827) | | | (827) |
| Comprehensive loss: | | | | | | |
| Net loss | | | | | (123,603) | (123,603) |
| Total comprehensive loss | | | | | | $ (123,603) |
| Balance, December 31, 2011 | 157,608,702 | $ 158 | $ 776,946 | $ --- | $ (556,963) | $ 220,141 |

See notes to consolidated financial statements.

## ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
## CONSOLIDATED STATEMENTS OF CASH FLOWS

| *In thousands* | Years Ended December 31, 2011 | 2010 | 2009 |
|---|---|---|---|
| **Cash flows from operating activities:** | | | |
| Net income (loss) | $ (123,603) | $ 85,248 | $ (80,008) |
| Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities: | | | |
| Depreciation, amortization and impairments | 4,614 | 6,147 | 4,219 |
| Accretion of discount on marketable securities | --- | --- | (20) |
| Stock-based compensation | 7,675 | 4,836 | 4,355 |
| Deferred executive compensation expense | 1,719 | 1,477 | 1,134 |
| Revaluation of warrant liability | 46,715 | 19,532 | 7,804 |
| Increase (decrease) from: | | | |
| Other current and non-current assets | (145) | 814 | 2,092 |
| Amounts due under license and collaboration agreements | 373 | 3,176 | 1,997 |
| Accounts payable | 2,394 | (1,684) | (4,564) |
| Accrued compensation and benefits | 82 | 76 | 233 |
| Accrued product development expenses | 3,759 | 117 | (1,864) |
| Other accrued expenses | 1,271 | (1,043) | (1,282) |
| Other liabilities | 1,660 | 18 | 662 |
| Deferred revenue | 999 | (111,611) | 14,347 |
| Deferred executive compensation paid | (775) | (685) | (1,009) |
| Net cash provided by (used in) operating activities | (53,262) | 6,418 | (51,904) |
| **Cash flows from investing activities:** | | | |
| Acquisitions of marketable securities | --- | --- | (7,599) |
| Proceeds from maturities of marketable securities | --- | --- | 22,426 |
| Change in restricted cash | --- | --- | (50) |
| Investment in property and equipment | (1,452) | (1,344) | (2,198) |
| Investment in intangible assets | (671) | (691) | (1,308) |
| Net cash provided by (used in) investing activities | (2,123) | (2,035) | 11,271 |
| **Cash flows from financing activities:** | | | |
| Proceeds from long-term borrowings | 4,375 | --- | --- |
| Repayment of long-term borrowings | (1,400) | (1,925) | (1,400) |
| Proceeds from issuance of common stock, net of issuance costs | 243,058 | 57,515 | 58,370 |
| Proceeds from issuance of common stock pursuant to warrants | 8,080 | 2,624 | --- |
| Principal payments under capital lease obligations | (66) | (118) | (87) |
| Payment of tax withholding obligations related to stock compensation | (827) | --- | --- |
| Proceeds from issuance of common stock pursuant to stock option and purchase plans | 4,791 | 789 | 568 |
| Net cash provided by financing activities | 258,011 | 58,885 | 57,451 |
| Net increase in cash and cash equivalents | 202,626 | 63,268 | 16,818 |
| Cash and cash equivalents, beginning of year | 103,630 | 40,362 | 23,544 |
| Cash and cash equivalents, end of year | $ 306,256 | $ 103,630 | $ 40,362 |
| **Supplemental disclosures:** | | | |
| Interest paid | $ 230 | $ 182 | $ 302 |
| Property and equipment acquired through capital lease | $ --- | $ 19 | $ 206 |
| Non-cash transaction – property and equipment included in accounts payable or accruals | $ 911 | $ --- | $ --- |

See notes to consolidated financial statements.

## 1. Nature of Business and Summary of Significant Accounting Policies

*Nature of Business*

ARIAD's vision is to transform the lives of cancer patients with breakthrough medicines. The Company's mission is to discover, develop and commercialize small-molecule drugs to treat cancer in patients with the greatest and most urgent unmet medical need - aggressive cancers where current therapies are inadequate. The Company's goal is to build a fully integrated oncology company.

The Company currently has three product candidates in development. Ponatinib is being studied in Phase 1 and Phase 2 clinical trials in patients with hematologic cancers, including chronic myeloid leukemia and Philadelphia positive acute lymphoblastic leukemia. AP26113 is being studied in a Phase 1/2 clinical trial in patients with advanced solid tumors including non-small cell lung cancer. Ridaforolimus is being studied in multiple clinical trials in patients with various types of cancers. Under the terms of a license agreement described in Note 2, Merck, Sharpe & Dohme Corp. ("Merck") is responsible for all activities related to the development, manufacture, and commercialization of ridaforolimus. In addition to our lead development programs, the Company has a focused drug discovery program centered on small-molecule therapies that are molecularly targeted to cell-signaling pathways implicated in cancer.

*Principles of Consolidation*

The consolidated financial statements include the accounts of ARIAD Pharmaceuticals, Inc. and its wholly-owned subsidiaries, ARIAD Corporation, ARIAD Pharma S.A. and ARIAD Pharma Ltd. Intercompany accounts and transactions have been eliminated in consolidation. Following the close of business on December 31, 2011, our wholly-owned subsidiary ARIAD Corporation was merged with and into ARIAD Pharmaceuticals, Inc.

*Accounting Estimates*

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts and disclosure of assets and liabilities at the date of the consolidated financial statements and the reported amounts and disclosure of revenue and expenses during the reporting period. Actual results could differ from those estimates.

*Cash Equivalents*

Cash equivalents include short-term, highly liquid investments, which consist principally of United States government and agency securities, purchased with remaining maturities of 90 days or less, and money market accounts.

*Restricted Cash*

Restricted cash consists of cash balances held as collateral for outstanding letters of credit related to the lease of the Company's laboratory and office facility and other purposes.

*Property and Equipment*

Property and equipment are recorded at cost. Depreciation is recorded using the straight-line method over the estimated useful lives of the assets (3 to 10 years). Leasehold improvements and assets under

capital leases are amortized over the shorter of their useful lives or lease term using the straight-line method.

*Intangible and Other Assets*

Intangible and other assets consist primarily of purchased technology and capitalized patent and license costs. The cost of purchased technology, patents and patent applications, costs incurred in filing patents and certain license fees are capitalized. Capitalized costs related to purchased technology are amortized over the estimated useful life of the technology. Capitalized costs related to issued patents are amortized over a period not to exceed seventeen years or the remaining life of the patent, whichever is shorter, using the straight-line method. Capitalized license fees are amortized over the periods to which they relate. In addition, capitalized costs are expensed when it becomes determinable that the related patents, patent applications or technology will not be pursued.

*Impairment of Long-Lived Assets*

The Company reviews its long-lived assets, including the above-mentioned intangible assets, for impairment when events or changes in circumstances indicate that the carrying amount of a long-lived asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets.

*Accrued Rent*

The Company recognizes rent expense for leases with increasing annual rents on a straight-line basis over the term of the lease. The amount of rent expense in excess of cash payments is classified as accrued rent. Any lease incentives received are deferred and amortized over the term of the lease. At December 31, 2011, other liabilities on the balance sheet include accrued rent of $1.7 million.

*Revenue Recognition*

The Company generates revenue from license and collaboration agreements with third parties related to use of the Company's technology and/or development and commercialization of product candidates. Such agreements may provide for payment to the Company of up-front payments, periodic license payments, milestone payments and royalties.

Revenue is recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable and collection is reasonably assured. Revenue arrangements with multiple elements are divided into separate units of accounting if certain criteria are met, including whether the delivered element has stand-alone value to the customer. When deliverables are separable, consideration received is allocated to the separate units of accounting based on the relative selling price of each deliverable and the appropriate revenue recognition principles are applied to each unit.

The Company also generates service revenue from license agreements with third parties related to internal services provided under such agreements. Service revenue is recognized as the services are delivered.

*Income Taxes*

The Company accounts for income taxes using an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed annually for differences between the financial statement basis and the income tax basis of assets and liabilities that will result in taxable or deductible amounts in the future. Such deferred income tax computations are based

on enacted tax laws and rates applicable to the years in which the differences are expected to affect taxable income. A valuation allowance is established when it is necessary to reduce deferred income tax assets to the amount that is considered to be more-likely-than-not realizable.

The Company does not recognize a tax benefit unless it is more likely than not that the tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The tax benefit that is recorded for these positions is measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement.

*Segment Reporting*

The Company organizes itself into one operating segment reporting to the chief executive officer.

*Stock-Based Compensation*

The Company awards stock options and other equity-based instruments to its employees, directors and consultants and provides employees the right to purchase common stock (collectively "share-based payments"), pursuant to stockholder approved plans. Compensation cost related to such awards is measured based on the fair value of the instrument on the grant date and is recognized on a straight-line basis over the requisite service period, which generally equals the vesting period.

*Executive Compensation Plan*

The Company has an unfunded deferred executive compensation plan that defers the payment of annual bonus awards to officers to future periods as specified in each award. The value of the awards is indexed to the value of specified mutual funds. The Company accrues a liability based on the value of the awards ratably over the vesting period (generally four years). The recorded balances of such awards are increased or decreased based on the actual total return and quoted market prices of the specified mutual funds.

*Subsequent Events*

The Company considers events or transactions that occur after the balance sheet date but before the financial statements are issued to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure.

*Recent Accounting Pronouncements*

In April 2010, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2010-17, *Revenue Recognition – Milestone Method*, which provides guidance on determining whether a milestone is substantive including the criteria that must be met for a milestone to be considered a substantive milestone and the recognition of consideration received upon achievement of a substantive milestone. ASU No. 2010-17 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after June 15, 2010. The Company adopted this ASU on January 1, 2011 with no material impact on its financial statements.

In October 2009, the FASB issued authoritative guidance that modifies the accounting for multiple element revenue arrangements. This guidance requires an entity to allocate revenue to each unit of accounting in multiple deliverable arrangements based on the relative selling price of each deliverable. It also changes the level of evidence of stand-alone selling prices required to separate deliverables by requiring an entity to make its best estimate of the stand-alone selling price of the deliverables when more objective evidence of selling price is not available. This guidance is effective for fiscal years beginning after June 15, 2010 and may be applied prospectively to new or materially modified arrangements after the effective date or retrospectively. The Company adopted this guidance on January

1, 2011 and although the adoption did not materially impact its financial condition, results of operations, or cash flows, this guidance may impact the Company's determination of the separation of deliverables for future arrangements.

In June 2011, the FASB issued ASU No. 2011-05, *Presentation of Comprehensive Income*, which requires the presentation of other comprehensive income in either a continuous statement of comprehensive income or in two separate but consecutive statements. ASU No. 2011-05 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2011 and requires retrospective application. This guidance will require a change in the presentation of the financial statements, however it will not have a material impact unless the Company has components of other comprehensive income other than net income (loss).

**2. Collaboration and License Agreements with Merck & Co., Inc.**

In July 2007, the Company entered into a collaboration agreement with Merck for the joint global development, manufacture and commercialization of ridaforolimus, the Company's lead product candidate, for use in cancer (the "Collaboration Agreement"). In May 2010, the Company entered into an amended and restated agreement with Merck for ridaforolimus (the "License Agreement"), which replaced the Collaboration Agreement. These agreements are described below.

*The Collaboration Agreement (July 2007 to May 2010)*

Under the terms of the Collaboration Agreement, as in effect until May 4, 2010, Merck and the Company were conducting a broad-based development program for the use of ridaforolimus in multiple types of cancer. Each party funded 50 percent of global development costs incurred. Under the terms of the Collaboration Agreement, Merck paid the Company an initial up-front payment of $75 million in July 2007 and milestone payments of $53.5 million through May 4, 2010, based on the achievement of specified clinical and regulatory events.

The Company's accounting policy for exclusive license arrangements is to recognize revenue when all revenue recognition criteria have been met. As the Collaboration Agreement included multiple elements, the Company identified the units of accounting and determined the related performance period. The Company assessed each of the deliverables related to the Collaboration Agreement against the separation criteria for multiple element arrangements and concluded that the license and research and development deliverables constituted one unit of accounting. This conclusion reflected the nature of the planned research and development services under the terms of the Collaboration Agreement and the ongoing research in multiple cancer indications. The up-front and milestone payments received were deferred and were being recognized as revenue through 2023, the estimated expiration of the patents related to the underlying technology, which was determined to be the performance period.

Development costs under the Collaboration Agreement were aggregated and split between the Company and Merck in accordance with the terms of the agreement. The Company's share of such development costs from inception of the collaboration up to May 4, 2010 was reflected in operating expenses in the Company's statement of operations.

*The License Agreement (May 2010 to present)*

Under the terms of the License Agreement, the Company has granted Merck an exclusive license to develop, manufacture and commercialize ridaforolimus in oncology, and Merck has assumed full responsibility for all activities related to the development, manufacture and commercialization of ridaforolimus and funds 100 percent of all ridaforolimus costs incurred after January 1, 2010. The License Agreement provides that Merck will develop ridaforolimus in multiple oncology indications. If ridaforolimus receives regulatory approval, Merck will be responsible for selling ridaforolimus worldwide, will record global sales and will pay the Company tiered double-digit royalties on global net sales. The Company has an option to co-promote ridaforolimus with up to 20 percent of the sales effort

in all indications in the United States and, in such case, the Company would be compensated by Merck for its sales efforts. In the first quarter of 2011, the Company elected to exercise its option to co-promote ridaforolimus for the sarcoma indication, subject to the terms of a co-promotion agreement being negotiated by the Company and Merck.

Under the License Agreement, in 2010 Merck paid the Company an initial up-front fee of $50 million and approximately $12.8 million for its share of costs incurred in the period from January 1, 2010 to May 4, 2010 related to development, manufacture and commercial activities for ridaforolimus in accordance with the cost-sharing provisions of the Collaboration Agreement as in effect during that period. In addition, Merck has agreed to pay the Company up to $514 million in regulatory and sales milestone payments, based on the successful development of ridaforolimus in multiple potential cancer indications and upon achievement of specified product sales thresholds. Through December 31, 2011, Merck has paid the Company a $25 million milestone payment for the acceptance of the marketing authorization application in Europe for the sarcoma indication. Potential additional milestone payments include up to $40 million associated with potential regulatory approvals for the sarcoma indication (consisting of $25 million for marketing approval in the United States, $10 million for approval to sell ridaforolimus in the European Union, including first pricing and reimbursement approval granted by a regulatory authority in any major European country or by the European Medicines Agency ("EMA"), and $5 million for marketing approval of ridaforolimus in Japan), up to $249 million associated with potential regulatory filings and approvals for other cancer indications, and up to $200 million associated with the achievement of certain sales thresholds. Merck submitted a new drug application for ridaforolimus to the FDA and a marketing authorization application for ridaforolimus to the EMA in the third quarter of 2011, both of which have been accepted for review by these agencies.

Pursuant to the License Agreement, all ridaforolimus activities that had been the responsibility of the Company under the Collaboration Agreement were transitioned to Merck. Merck agreed to pay the Company for its internal transition services at agreed upon rates and reimburse the Company for all external costs incurred in connection with transition services or research and development activities. Accordingly, the remaining deliverables of the Company were limited to transition services for which the Company could establish fair value and all deferred revenue was recognized as of May 4, 2010. Any remaining service revenues are recognized when earned and other revenue recognition criteria are met.

The Company determined that this License Agreement was a new agreement for accounting purposes, as the economic terms and deliverables were materially modified from the prior arrangement. The Company assessed each of the deliverables related to the License Agreement against the separation criteria for multiple element arrangements and concluded that there are two units of accounting, namely the license and the transition services. The Company concluded that the license deliverable has stand-alone value, as the nature of the transition services could be provided by other vendors and there was objective and reliable evidence of the fair value of the undelivered transition services. The Company's accounting policy for exclusive licenses is to recognize revenue when all revenue recognition criteria are met. Accordingly, the Company recognized the revenue associated with the delivered elements of the agreement in the second quarter of 2010.

The amounts recognized as license and collaboration revenue for the year ended December 31, 2010 included the following components related to the Merck agreements:

- $50 million up-front payment pursuant to the License Agreement,
- $12.8 million payment received from Merck pursuant to the License Agreement as payment for the Company's 50 percent share of costs incurred from January 1, 2010 to May 4, 2010, and
- $111.5 million representing the recognition of revenue deferred as of December 31, 2009 under the Company's accounting for the Collaboration Agreement.

For the year ended December 31, 2011, license and collaboration revenue included the $25 million milestone payment received from Merck for acceptance of the submission of the marketing authorization application for ridaforolimus for the sarcoma indication in Europe.

For the years ended December 31, 2011 and 2010, the Company recorded service revenue of approximately $111,000 and $4.5 million, respectively. The cost of such services is reflected in operating expenses in the period in which they were incurred.

Merck is required to reimburse the Company for the cost of any services related to ridaforolimus being provided to the Company by outside service providers from May 4, 2010 until completion. Based on the nature of the arrangement with Merck for management of such services and reimbursement of their costs, reimbursement received from Merck for the cost of such services is reflected as an offset to the related cost and presented on a net basis in operating expenses. Such services were substantially completed in 2010. As noted above, the payment for all internal costs associated with transition services is presented on a gross basis as service revenue.

## 3. Property and Equipment, Net

Property and equipment, net, was comprised of the following at December 31:

| *In thousands* | 2011 | 2010 |
|---|---|---|
| Leasehold improvements | $ 22,252 | $ 22,090 |
| Construction in progress | 699 | --- |
| Equipment and furniture | 17,032 | 15,675 |
| | 39,983 | 37,765 |
| Less accumulated depreciation and amortization | (33,372) | (30,728) |
| | $ 6,611 | $ 7,037 |

Depreciation and amortization expense for the years ended December 31, 2011, 2010 and 2009 was $2.8 million, $3.0 million and $3.2 million, respectively.

The Company leases certain assets under capital leases having terms up to three years. Assets under capital leases included in property and equipment were as follows at December 31:

| *In thousands* | 2011 | 2010 |
|---|---|---|
| Equipment and furniture | $ 392 | $ 420 |
| Less accumulated depreciation and amortization | (257) | (172) |
| | $ 135 | $ 248 |

## 4. Intangible and Other Assets, Net

Intangible and other assets, net, were comprised of the following at December 31:

| *In thousands* | 2011 | 2010 |
|---|---|---|
| Capitalized patent and license costs | $ 6,799 | $ 6,465 |
| Purchased technology | 5,901 | 5,901 |
| | 12,700 | 12,366 |
| Less accumulated amortization | (6,957) | (5,332) |
| | 5,743 | 7,034 |
| Other assets | 42 | 38 |
| | $ 5,785 | $ 7,072 |

Amortization expense for intangible assets amounted to $1.7 million, $0.9 million and $1.0 million in 2011, 2010 and 2009, respectively. The weighted average amortization period for intangible assets was 14.9 years, 14.8 years and 15.2 years in 2011, 2010 and 2009, respectively. The estimated future amortization expense is $470,000 for 2012 and $435,000 per year for 2013, 2014, 2015, 2016 and $3.5 million thereafter.

For the years ended December 31, 2011, 2010 and 2009, the Company recorded charges in research and development expense of $312,000, $2.4 million and $47,000, respectively, to reflect impairment of the carrying value of certain capitalized patents and licenses. In 2010, the charges relate to the write-off of the carrying value of patents related to the Company's NF-κB technology, upon unsuccessful conclusion of litigation related to this technology, and an impairment of the carrying value of the ARGENT patents and certain other patents based on an assessment of future cash flows anticipated from these technologies.

## 5. Long-term Debt and Capital Lease Obligations

Long-term debt and capital lease obligations were comprised of the following at December 31:

| *In thousands* | 2011 | 2010 |
|---|---|---|
| Bank term loan | $ 12,600 | $ 9,625 |
| Capital lease obligations | 69 | 135 |
| | 12,669 | 9,760 |
| Less current portion | (1,454) | (1,466) |
| | $ 11,215 | $ 8,294 |

In January 2011, the Company amended the existing term loan with the bank. The amendment increased the outstanding balance of the loan from $9.6 million at December 31, 2010 to $14.0 million, extended the maturity date from March 31, 2013 to December 31, 2015, and re-set the quarterly repayment provisions with payments increasing from 2.5 percent of the principal amount in the first quarter, commencing on March 31, 2011, to 8.75 percent of the principal amount in the final quarter, together with interest throughout the term of the loan.

The loan bears interest at LIBOR plus 1.25 to 2.25 percent, depending on the percentage of the Company's liquid assets on deposit with or invested through the bank, or at the prime rate. The effective interest rate on the loan was 1.79 percent at December 31, 2011. The loan is secured by a lien on all assets of the Company excluding intellectual property, which the Company has agreed not to pledge to any other party. The loan requires the Company to maintain a minimum of $15.0 million in unrestricted cash, cash equivalents and investments. The loan also contains certain covenants that restrict additional indebtedness, additional liens and sales of assets, and dividends, distributions or repurchases of common stock.

In addition, the Company leases certain equipment under capital leases with original terms of generally three years. These leases have effective interest rates ranging from 5.6 percent to 7.2 percent and are secured by the underlying leased assets.

The future scheduled principal payments due under these financing obligations were as follows at December 31, 2011:

| *In thousands* | Bank Term Loan | Capital Lease Obligations |
|---|---|---|
| Year ended December 31: | | |
| 2012 | $ 1,400 | $ 54 |
| 2013 | 2,100 | 15 |
| 2014 | 4,200 | --- |
| 2015 | 4,900 | --- |
| | 12,600 | 69 |
| Less current portion | (1,400) | (54) |
| Long-term portion | $ 11,200 | $ 15 |

## 6. Executive Compensation Plan

Under the Company's deferred executive compensation plan, the Company accrues a liability for the value of the awards ratably over the vesting period. The grant date value of awards made in 2011, 2010 and 2009 were $1.6 million, $1.8 million and $1.1 million, respectively. The net expense for this plan was $1.7 million, $1.5 million and $1.1 million in 2011, 2010 and 2009, respectively. The estimated future expense for unvested awards based on the value at December 31, 2011, is $1.5 million, $544,000 and $136,000, for 2012, 2013 and 2014, respectively.

## 7. Leases, Licensed Technology and Other Commitments

*Facility Lease*

The Company conducts its operations in a 100,000 square foot office and laboratory facility under a non-cancelable operating lease. The lease was amended in 2011 and provides that the current lease term extends to July 2019 with two consecutive five-year renewal options. The Company maintains an outstanding letter of credit of $699,000 in accordance with the terms of the amended lease. Rent expense, net of sublease income of $67,000 in 2011 and $28,000 in 2010, amounted to $2.0 million, $2.1 million and $2.1 million in 2011, 2010 and 2009, respectively. Future minimum annual rental payments through July 2019 are $3.3 million in 2012, $5.2 million in 2013, $5.3 million in 2014, $5.4 million in 2015, $5.5 million in 2016, and $14.5 million thereafter, which are net of expected sub-lease income of $39,000 in 2012.

*Licensed Technology*

The Company has entered into agreements with several universities under the terms of which the Company has received exclusive licenses to technology and intellectual property. The agreements, which are generally cancelable by the Company, provide for the payment of license fees and/or minimum payments, which are generally creditable against future royalties. Fees paid by the Company amounted to $145,000 in each of 2011, 2010 and 2009, and are expected to amount to $145,000 in 2012 and thereafter. In addition, the agreements provide for payments upon the achievement of certain milestones in product development. The agreements also require the Company to fund certain costs associated with the filing and prosecution of patent applications.

*Other Commitments*

The Company has entered into various employment agreements with officers of the Company. The agreements for eight of these officers have remaining terms as of December 31, 2011 of up to two years, providing for aggregate base salaries of $3.0 million for 2012 and $1.5 million for 2013.

## 8. Stockholders' Equity and Warrants

*Preferred Stock*

The Company has authorized 10,000,000 shares of preferred stock which the Board of Directors is authorized to designate and issue in different series.

*Common Stock and Warrants*

At December 31, 2011, the Company had 240,000,000 shares of common stock authorized.

On February 25, 2009, the Company sold 14,378,698 shares of its common stock in a registered direct offering to institutional investors, at a purchase price of $1.69 per share, resulting in net proceeds after fees and expenses of $22.8 million. The investors also received warrants to purchase an additional 10,784,024 shares of the Company's common stock exercisable at a price of $2.15 per share in cash or pursuant to the net exercise provisions of the warrants. At the election of the warrant holder, upon

certain transactions, including a merger, tender offer or sale of all or substantially all of the assets of the Company, the holder may receive cash in exchange for the warrant, in an amount determined by application of the Black-Scholes option valuation model at the time of any such event, if the consideration received by the stockholders from such transaction is less than $2.15 per share. The warrants became exercisable on August 25, 2009 and expired on February 25, 2012. During the year ended December 31, 2010, 1,220,414 warrants were exercised for proceeds to the Company of $2.6 million. During the year ended December 31, 2011, a total of 3,757,767 warrants were exercised by the holders for proceeds to the Company of approximately $8.1 million. Prior to exercise, the warrants were recorded at fair value, with the adjustment to carrying value recognized in earnings. Upon exercise, the sum of the fair value of the exercised warrants and the proceeds received are credited to additional paid-in-capital and totaled $25.0 million and $4.7 million in 2011 and 2010, respectively. At December 31, 2011, there were 5,805,843 warrants outstanding, which, when exercised in 2012, resulted in proceeds to the Company of approximately $12.5 million. Upon the exercise of these remaining warrants, the balance of the warrant liability was credited to stockholders' equity and the liability was eliminated.

As a result of the potential cash settlement provision, the warrants do not qualify to be classified as an equity instrument but instead are classified as a derivative liability. Accordingly, the fair value of the warrants is reflected on the consolidated balance sheet as a liability and such fair value is adjusted at each financial reporting date with the adjustment reflected in the consolidated statement of operations. The Company classified the warrant obligation as a long-term liability as there was no indication that a merger, tender offer or similar transaction was probable.

On August 7, 2009, the Company sold 21,850,000 shares of its common stock in an underwritten public offering, including 2,850,000 shares of common stock upon exercise by the underwriters of their over-allotment option, at a purchase price of $1.75 per share. Net proceeds of this offering, after underwriting discounts and commissions and direct expenses, were $35.6 million.

On October 29, 2010, the Company sold 16,000,000 shares of its common stock in an underwritten public offering at a purchase price of $3.70 per share. Net proceeds of this offering, after underwriting discounts and commissions and expenses, were approximately $57.5 million.

On December 20, 2011, the Company sold 24,725,000 shares of its common stock in an underwritten public offering at a purchase price of $10.42 per share. Net proceeds of this offering, after underwriting discounts and commissions and expenses, were approximately $243.1 million.

On January 11, 2010, the Company filed a shelf registration statement with the U.S. Securities and Exchange Commission ("SEC") for the issuance of common stock, preferred stock, various series of debt securities and/or warrants or rights to purchase any of such securities, either individually or in units, with a total value of up to $125 million, from time to time at prices and on terms to be determined at the time of any such offering. This filing was declared effective on January 21, 2010. Following the October 29, 2010 stock offering, the Company has approximately $65.8 million of securities remaining available under this shelf registration statement.

On December 14, 2011, the Company filed a shelf registration statement with the SEC for the issuance of an unspecified amount of common stock, preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in units, from time to time at prices and on terms to be determined at the time of any such offering. This filing was effective upon filing and will remain in effect for up to three years from filing.

## 9. Fair Value of Financial Instruments

The Company provides disclosure of financial assets and financial liabilities that are carried at fair value based on the price that would be received upon sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements may be classified based on the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities using the following three levels:

Level 1 – Inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

Level 2 – Inputs include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (i.e., interest rates, yield curves, etc.) and inputs that are derived principally from or corroborated by observable market data by correlation or other means (market corroborated inputs).

Level 3 – Unobservable inputs that reflect the Company's estimates of the assumptions that market participants would use in pricing the asset or liability. The Company develops these inputs based on the best information available, including its own data.

The following table presents information about the Company's assets and liabilities as of December 31, 2011 and 2010 that are measured at fair value on a recurring basis and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value:

| | December 31, 2011 | | | |
|---|---|---|---|---|
| *In thousands* | **Total** | **Level 1** | **Level 2** | **Level 3** |
| Warrant liability | $ 58,639 | $ --- | $ 58,639 | $ --- |

| | December 31, 2010 | | | |
|---|---|---|---|---|
| *In thousands* | **Total** | **Level 1** | **Level 2** | **Level 3** |
| Warrant liability | $ 28,815 | $ --- | $ --- | $ 28,815 |

The Company's warrant liability is carried at fair value and, at December 31, 2010, was classified as Level 3 in the fair value hierarchy due to the use of significant unobservable inputs. At December 31, 2011, the unobservable inputs did not have a significant impact on the valuation of the warrant liability and, therefore, the Company classified the warrant liability as Level 2 within the fair value hierarchy. This reclassification from Level 3 reflects that the warrants' exercise price is significantly lower than the market price of the underlying common stock on the reporting date. The fair value of the warrants is determined using the Black-Scholes option valuation model, applying the following inputs as of December 31, 2011, 2010 and 2009:

| | **2011** | **2010** | **2009** |
|---|---|---|---|
| Market price per share of the Company's common stock | $ 12.25 | $ 5.10 | $ 2.28 |
| Risk-free interest rate | 0.015% | 0.34% | 1.23% |
| Expected term (years) | 0.2 | 1.2 | 2.2 |
| Dividend yield | --- | --- | --- |
| Volatility | 59.9% | 54.0% | 79.0% |

The increase in the fair value of the warrants was recognized in other income (expense) in the consolidated statement of operations. The changes in the fair value of the warrant liability for the years ended December 31, 2011, 2010 and 2009 were as follows:

| *In thousands* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Balance, beginning of year | $ 28,815 | $ 11,363 | $ --- |
| Issuance of warrants | --- | --- | 3,559 |
| Revaluation of warrants | 46,715 | 19,532 | 7,804 |
| Exercise of warrants | (16,891) | (2,080) | --- |
| Balance, end of year | $ 58,639 | $ 28,815 | $ 11,363 |

The carrying amounts of cash equivalents, accounts payable and accrued liabilities approximate fair value because of their short-term nature. The carrying amount of the Company's bank term loan approximates fair value due to its variable interest rate and other terms. The Company's obligation under its executive compensation plan is based in part on the current fair market value of specified mutual funds, which is therefore stated at its estimated fair value.

**10. Stock Plans**

*ARIAD Stock Option and Stock Plans*

The Company's 1991, 1994, 2001 and 2006 stock option and stock plans (the "Plans") provide for the awarding of nonqualified and incentive stock options, stock grants and restricted stock units to officers, directors, employees and consultants of the Company. Stock options become exercisable as specified in the related option certificate, typically over a four-year period, and expire ten years from the date of grant. Stock grants and restricted stock units provide the recipient with ownership of common stock subject to any rights the Company may have to repurchase the shares granted or other restrictions. The 1991 and 1994 Plans have expired according to their terms and the 2001 Plan has no shares remaining available for grant, although existing stock options granted under these Plans remain outstanding. As of December 31, 2011, there are 2,818,832 shares available for awards under the 2006 Plan.

*Employee Stock Purchase Plan*

In 1997, the Company adopted the 1997 Employee Stock Purchase Plan and reserved 500,000 shares of common stock for issuance under this plan. In June 2008, the Plan was amended to reserve an additional 500,000 shares of common stock for issuance. Under this plan, substantially all of the Company's employees may, through payroll withholdings, purchase shares of the Company's common stock at a price of 85 percent of the lesser of the fair market value at the beginning or end of each three-month withholding period. In 2011, 2010 and 2009, 87,331, 176,318 and 401,797 shares of common stock were issued under the plan, respectively.

**11. Stock-Based Compensation**

The Company awards stock options and other equity-based instruments to its employees, directors and consultants and provides employees the right to purchase common stock (collectively "share-based payments"), pursuant to stockholder approved plans. The Company's statement of operations included total compensation cost from share-based payments for the years ended December 31, as follows:

| *In thousands* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Compensation cost from: | | | |
| Stock options | $ 2,893 | $ 1,879 | $ 3,068 |
| Stock and stock units | 4,601 | 2,834 | 1,096 |
| Purchases of common stock at a discount | 181 | 123 | 191 |
| | $ 7,675 | $ 4,836 | $ 4,355 |
| Compensation cost included in: | | | |
| Research and development expenses | $ 3,782 | $ 2,444 | $ 2,123 |
| General and administrative expenses | 3,893 | 2,392 | 2,232 |
| | $ 7,675 | $ 4,836 | $ 4,355 |

*Stock Options*

Stock options are granted with an exercise price equal to the closing market price of the Company's common stock on the date of grant. Stock options generally vest ratably over four years and have contractual terms of ten years. Stock options are valued using the Black-Scholes option valuation model and compensation cost is recognized based on such fair value over the period of vesting on a straight-line basis.

The following table summarizes information about stock options as of and for the years ended December 31, 2011, 2010 and 2009:

| *In thousands, except per share amounts* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Weighted average fair value of options granted, per share | $ 5.80 | $ 2.43 | $ 1.03 |
| Total cash received from exercises of stock options | 4,648 | 418 | 206 |
| Total intrinsic value of stock options exercised | 5,169 | 331 | 271 |

The weighted average fair value of options granted in the years ended December 31, 2011, 2010 and 2009, reflect the following weighted-average assumptions:

| | 2011 | 2010 | 2009 |
|---|---|---|---|
| Expected life of options granted *(in years)* | 7.48 | 6.75 | 7.04 |
| Expected volatility | 74.77% | 78.54% | 70.68% |
| Risk-free rate | 2.53% | 2.57% | 2.75% |
| Expected dividends | 0% | 0% | 0% |

The expected life assumption is based on an analysis of historical behavior of participants related to options awarded over time. The expected volatility assumption for the years ended December 31, 2011, 2010 and 2009 is based on the implied volatility of the Company's common stock, derived from analysis of historical traded and quoted options on the Company's common stock over the period commensurate with the expected life of the options granted. The risk-free rate is based on the forward U.S. Treasury yield curve. The expected dividends reflect the Company's current and expected future policy for dividends on its common stock.

Stock option activity under the Company's stock plans for the year ended December 31, 2011 was as follows:

| | Number of Shares | Weighted Average Exercise Price Per Share |
|---|---|---|
| Options outstanding, January 1, 2011 | 7,177,191 | $ 4.42 |
| Granted | 1,599,519 | $ 8.05 |
| Forfeited | 225,295 | $ 4.16 |
| Exercised | 1,170,086 | $ 4.40 |
| Options outstanding, December 31, 2011 | 7,381,329 | $ 5.22 |

The following table summarizes information about stock options outstanding as of December 31, 2011:

| | Options Outstanding | Options Exercisable | Options Vested and Expected To Vest |
|---|---|---|---|
| Number of options | 7,381,239 | 5,055,872 | 7,066,555 |
| Weighted average exercise price per share | $ 5.22 | $ 4.84 | $ 5.21 |
| Aggregate intrinsic value *(in 000's)* | $ 51,878 | $ 37,468 | $ 49,717 |
| Weighted average remaining contractual term | 5.52 years | 4.07 years | 5.38 years |

Options expected to vest consist of options scheduled to vest in the future less expected forfeitures.

At December 31, 2011, total unrecognized compensation cost related to non-vested stock options outstanding amounted to $7.1 million. That cost is expected to be recognized over a weighted-average period of 2.85 years.

*Stock and Stock Unit Grants*

Stock and stock unit grants are provided to non-employee directors as compensation and generally carry no restrictions as to resale or are fully vested upon grant. Stock and stock unit grants to officers carry restrictions as to resale for periods of time or vesting provisions over time as specified in the grant. Stock and stock unit grants are valued at the closing market price of the Company's common stock on the date of grant and compensation expense is recognized over the requisite service period, vesting period or period during which restrictions remain on the common stock or stock units granted.

Stock and stock unit activity under the Company's stock plans for the year ended December 31, 2011 was as follows:

| | Number of Shares | Weighted Average Grant Date Fair Value |
|---|---|---|
| Outstanding, January 1, 2011 | 2,779,300 | $ 2.83 |
| Granted | 1,255,681 | $ 7.43 |
| Forfeited | 115,632 | $ 4.05 |
| Vested or restrictions lapsed | 1,134,323 | $ 3.69 |
| Outstanding, December 31, 2011 | 2,785,026 | $ 4.51 |

Included in stock and stock units granted in the above table are 392,500 performance share units that will vest upon regulatory approval of ponatinib by the U.S. Food and Drug Administration on or before December 31, 2016. Compensation expense related to these performance share units will be recognized upon achieving such regulatory approval.

At December 31, 2011, total unrecognized compensation cost related to time-vested stock and stock unit awards amounted to $5.5 million. That cost is expected to be recognized over a weighted average of 1.82 years. Unrecognized compensation cost related to stock units with performance-based vesting conditions was $3.1 million at December 31, 2011. Compensation expense for these awards will begin to be recognized when vesting is probable. The total fair value of stock and stock unit awards that vested in 2011, 2010 and 2009 was $8.0 million, $1.6 million and $279,000, respectively.

*Purchase of Common Stock Pursuant to Employee Stock Purchase Plan*

Purchases of common stock by employees are provided pursuant to the Company's employee stock purchase plan. Purchase price is calculated as 85 percent of the lower of the closing price of our common stock on the first trading day or last trading day of each calendar quarter. Compensation cost is equal to

the fair value of the discount on the date of grant and is recognized as compensation in the period of purchase.

## 12. Net Income (Loss) Per Share

Basic net income (loss) per share amounts have been computed based on the weighted-average number of common shares outstanding. Diluted net income (loss) per share amounts have been computed based on the weighted-average number of common shares outstanding plus the dilutive effect of potential common shares. The computation of potential common shares has been performed using the treasury stock method. The changes in income or loss that would result if the warrants were reported as an equity instrument are reflected as an adjustment to the numerator when warrants would be dilutive. The warrants are antidilutive for all periods presented. When net loss is reported, diluted and basic net loss per share amounts are the same as the impact of potential common shares is antidilutive.

The calculation of net income (loss) and the number of shares used to compute basic and diluted earnings per share for the years ended December 31, 2011, 2010 and 2009 are as follows:

| *In thousands* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Net income (loss) | $ (123,603) | $ 85,248 | $ (80,008) |
| Weighted average shares outstanding – basic | 132,375 | 113,020 | 93,330 |
| Dilutive stock options | --- | 572 | --- |
| Restricted stock and restricted stock units | --- | 1,142 | --- |
| Weighted average shares outstanding – diluted | 132,375 | 114,734 | 93,330 |

For the years ended December 31, 2011, 2010 and 2009, the following potentially dilutive securities were not included in the computation of net income (loss) per share because the effect would be anti-dilutive:

| *In thousands* | 2011 | 2010 | 2009 |
|---|---|---|---|
| Stock options | 7,381 | 5,852 | 7,684 |
| Restricted stock and restricted stock units | 2,785 | --- | 1,489 |
| Warrants | 5,806 | 9,564 | 10,784 |
| | 15,972 | 15,416 | 19,957 |

## 13. Income Taxes

The Company is subject to U.S. federal and Massachusetts state corporate income taxes. For the years ended December 31, 2011, 2010 and 2009, the Company did not have any federal or state income tax expense given its continued cumulative net operating losses. A reconciliation of the federal statutory corporate income tax rate to the effective income tax rate for the years ended December 31, 2011, 2010 and 2009 is as follows:

| | 2011 | 2010 | 2009 |
|---|---|---|---|
| Statutory federal income tax rate | (35)% | 35% | (35)% |
| State income tax rate, net of federal benefit | (4) | 5 | (6) |
| Revaluation of warrant liability | 13 | 8 | 3 |
| Other permanent differences | --- | 1 | 1 |
| Change in valuation allowance | 26 | (49) | 37 |
| Effective tax rate | 0% | 0% | 0% |

The components of deferred income taxes were as follows at December 31:

| *In thousands* | 2011 | 2010 |
|---|---|---|
| Deferred tax liabilities: | | |
| Intangibles | $ 2,385 | $ 2,813 |
| Deferred tax assets: | | |
| Net operating loss carryforwards | 161,951 | 134,065 |
| Federal and state tax credit carryovers | 23,380 | 24,489 |
| Depreciation | 4,924 | 4,837 |
| Stock-based compensation | 3,420 | 3,122 |
| Other | 2,158 | 1,289 |
| Total deferred tax assets | 195,833 | 167,802 |
| Deferred tax assets, net | 193,448 | 164,989 |
| Valuation allowance | (193,448) | (164,989) |
| Total deferred taxes | $ --- | $ --- |

At December 31, 2011, the Company had available estimated net operating loss carryforwards and research and development credit carryforwards for federal and state tax reporting purposes as follows:

| | Amount | Expiring if not utilized |
|---|---|---|
| | *(in 000s)* | |
| Net operating loss carryforwards: | | |
| Federal | $ 457,459 | 2012 through 2031 |
| State | $ 79,197 | 2012 through 2016 |
| Research and development credit carryforwards: | | |
| Federal | $ 18,448 | 2012 through 2031 |
| State | $ 7,588 | 2012 through 2026 |

Since the Company has not yet achieved sustained profitable operations, management believes the deferred tax assets do not satisfy the more-likely-than-not realization criteria and has recorded a valuation allowance for the entire net deferred tax assets. The valuation allowance increased by $28.5 million and $21.9 million in 2011 and 2009, respectively, due to taxable losses and resulting increases in net operating loss carryforwards. The valuation allowance decreased by $43.5 million in 2010 due to the recognition of previously deferred revenue for tax purposes and utilization of net operating loss carryforwards. In 2010, the Company recognized a tax benefit from the utilization of net operating loss carryforwards for federal and state purposes of $7.9 million and $1.4 million, respectively. The Company does not have any material uncertain tax positions.

Due to the Company's historical net operating loss position, the Company's U.S. federal and Massachusetts tax returns remain open to examination for three years after the Company utilizes that year's net operating loss carryforward. The Company's earliest year which generated a net operating loss including in the Company's current net operating loss carryforward is 1997 for U.S. federal tax purposes and 2006 for Massachusetts state tax purposes.

**14. Related Party Transaction**

In the offering and sale by the Company of 21,850,000 shares of its common stock on August 7, 2009 (see Note 8), the Company's Chief Executive Officer purchased 1,714,286 shares, at the offering price of $1.75 per share, for $3 million.

## 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 principal executive officer and principal financial officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in paragraph (e) of Rules 13a-15 and 15d-15 under the Securities Exchange Act of 1934) as of the end of the period covered by this Annual Report on Form 10-K, have concluded that, based on such evaluation, our disclosure controls and procedures were effective at the reasonable assurance level to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, particularly during the period in which this Annual Report on Form 10-K was being prepared.

(b) *Changes in Internal Controls.* There were no changes in our internal control over financial reporting, identified in connection with the evaluation of such internal control that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Management's Report on Internal Control over Financial Reporting**

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. The Company's internal control system was designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation and fair presentation of published financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2011. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework.* Based on our assessment we believe that, as of December 31, 2011, the Company's internal control over financial reporting is effective based on those criteria.

Deloitte & Touche LLP, the independent registered public accounting firm that audited the Company's consolidated financial statements, has issued an attestation report on the Company's internal control over financial reporting as of December 31, 2011, which is included below.

**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders of
ARIAD Pharmaceuticals, Inc.
Cambridge, Massachusetts

We have audited the internal control over financial reporting of ARIAD Pharmaceuticals, Inc. and subsidiaries (the "Company") as of December 31, 2011, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company'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, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the 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, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2011 of the Company and our report dated February 29, 2012 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
February 29, 2012

## ITEM 9B: OTHER INFORMATION

Not applicable.

## PART III

### ITEM 10: DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The response to this item is incorporated by reference from the discussion responsive thereto under the captions "Board of Directors," "Executive Officers," "Section 16(a) Beneficial Ownership Reporting Compliance" and "Corporate Code of Conduct and Ethics" in the Company's Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders.

### ITEM 11: EXECUTIVE COMPENSATION

The response to this item is incorporated by reference from the discussion responsive thereto under the captions "Executive Compensation", "Compensation Committee Interlocks and Insider Participation", "Compensation Discussion and Analysis", "Compensation Committee Report", "Board of Directors" and "Compensation Practices and Policies Relating to Risk Management" in the Company's Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders.

### ITEM 12: SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The response to this item is incorporated by reference from the discussion responsive thereto under the captions "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in the Company's Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders.

### ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The response to this item is incorporated by reference from the discussion responsive thereto under the captions "Board of Directors" and "Certain Relationships and Related Transactions" in the Company's Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders.

### ITEM 14: PRINCIPAL ACCOUNTING FEES AND SERVICES

The response to this item is incorporated by reference from the discussion responsive thereto under the caption "Proposal 3: Ratification of Selection of Independent Registered Public Accounting Firm" in the Company's Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders.

## PART IV

## ITEM 15: EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a)(1) The following Consolidated Financial Statements, Notes thereto and Report of Independent Registered Public Accounting Firm have been presented in Item 8:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets

Consolidated Statements of Operations

Consolidated Statements of Stockholders' Equity (Deficit)

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

(a)(2) Financial Statement Schedules:

Schedules have been omitted because of the absence of conditions under which they are required or because the required information is included in the financial statements or notes thereto.

(a)(3) The Exhibits listed in the Exhibit Index are filed herewith in the manner set forth therein.

(b) See (a) (3) above.

(c) See (a) (2) above.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge and Commonwealth of Massachusetts on the 29th day of February, 2012.

**ARIAD PHARMACEUTICALS, INC.**

**By:** /s/ Harvey J. Berger, M.D.
**Name:** Harvey J. Berger, M.D.
**Title:** Chairman, Chief Executive Officer and President

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.

| Signature | Title | Date |
|---|---|---|
| /s/ Harvey J. Berger, M.D.<br>Harvey J. Berger, M.D. | Chairman of the Board of Directors, Chief Executive Officer and President (Principal Executive Officer) | February 29, 2012 |
| /s/ Edward M. Fitzgerald<br>Edward M. Fitzgerald | Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer) | February 29, 2012 |
| /s/ Jay R. LaMarche<br>Jay R. LaMarche | Director | February 29, 2012 |
| /s/ Athanase Lavidas, Ph.D.<br>Athanase Lavidas, Ph.D. | Director | February 29, 2012 |
| /s/ Massimo Radaelli, Ph.D.<br>Massimo Radaelli, Ph.D. | Director | February 29, 2012 |
| /s/ Norbert G. Riedel, Ph.D.<br>Norbert G. Riedel, Ph.D. | Director | February 29, 2012 |
| /s/ Robert M. Whelan, Jr.<br>Robert M. Whelan, Jr. | Director | February 29, 2012 |
| /s/ Wayne Wilson<br>Wayne Wilson | Director | February 29, 2012 |

**ARIAD Pharmaceuticals, Inc.**

**Form 10-K for the year ended December 31, 2011**

**Exhibit List**

| Exhibit Number | | Exhibit Description | Filed with this Report | Incorporated by Reference herein from Form or Schedule | Filing Date | SEC File/ Reg. Number |
|---|---|---|---|---|---|---|
| 2.1 | | Certificate of Ownership and Merger of ARIAD Corporation into ARIAD Pharmaceuticals, Inc. dated December 28, 2011 | X | | | |
| 3.1 | | Certificate of Incorporation of ARIAD Pharmaceuticals, Inc., as amended | | 10-Q (Exhibit 3.1) | 05/10/10 | 000-21696 |
| 3.2 | | Amended and Restated By-laws of ARIAD Pharmaceuticals, Inc. | | 8-K (Exhibit 3.1) | 08/27/09 | 000-21696 |
| 4.1 | | Specimen common stock certificate of ARIAD Pharmaceuticals, Inc. | X | | | |
| 4.2 | | Form of Warrant to Purchase Common Stock dated February 25, 2009 | | 8-K (Exhibit 10.2) | 02/20/09 | 000-21696 |
| **Leases and Credit Agreements** | | | | | | |
| 10.1 | .1 | Lease Agreement, dated January 8, 1992, between ARIAD Pharmaceuticals, Inc. and Forest City Cambridge, Inc. | | 10 (Exhibit 10.1) | 04/30/93 | 000-21696 |
| | .2 | Eighth Amendment to Lease dated October 30, 2006 | | 10-K (Exhibit 10.57) | 03/14/07 | 000-21696 |
| | .3 | Ninth Amendment to Lease dated May 20, 2011, between ARIAD Corporation and UP 26 Landsdowne LLC | | 10-Q (Exhibit 10.1) | 08/09/11 | 000-21696 |
| | .4 | Assignment and Assumption dated December 31, 2011, by and between ARIAD Corporation and ARIAD Pharmaceuticals, Inc. (for lease at 26 Landsdowne Street) | X | | | |
| 10.2 | .1 | Credit Agreement, dated as of March 12, 2003, by and among ARIAD Pharmaceuticals, Inc., ARIAD Corporation and ARIAD Gene Therapeutics, Inc. and Citizens Bank of Massachusetts | | 10-Q (Exhibit 10.1) | 05/13/03 | 000-21696 |
| | .2 | Amendment No. 1 to Credit Agreement, dated as of December 31, 2003 | | 10-K (Exhibit 10.57) | 03/02/04 | 000-21696 |
| | .3 | Amendment No. 2 to Credit Agreement dated as of December 31, 2004 | | 10-K (Exhibit 10.52) | 02/18/05 | 000-21696 |
| | .4 | Amendment No. 3 to Credit Agreement, dated as of March 26, 2008, by and among ARIAD Pharmaceuticals, Inc., ARIAD Corporation and ARIAD Gene Therapeutics, Inc. and RBS Citizens, National Association, successor by merger to Citizens Bank of Massachusetts | | 8-K (Exhibit 10.2.4) | 03/27/08 | 000-21696 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | .5 | Waiver and Amendment No. 4 to Credit Agreement dated as of June 19, 2009, by and among ARIAD Pharmaceuticals, Inc., ARIAD Corporation and RBS Citizens, National Association | | 10-Q (Exhibit 10.3) | 08/10/09 | 000-21696 |
| | .6 | Waiver and Amendment No. 5 to Credit Agreement dated as of December 14, 2009 | | 10-K (Exhibit 10.2.6) | 03/16/10 | 000-21696 |
| | .7 | Amendment No. 6 to Credit Agreement, dated as of January 6, 2011 | | 8-K (Exhibit 10.2.7) | 01/12/11 | 000-21696 |
| | .8 | Amendment No. 7 to Credit Agreement, dated as of December 28, 2011, by and among ARIAD Pharmaceuticals, Inc., ARIAD Corporation and RBS Citizens, National Association | X | | | |
| 10.3 | | Security Agreement - All Assets, dated as of March 12, 2003, by and between ARIAD Pharmaceuticals, Inc. and Citizens Bank of Massachusetts | | 10-Q (Exhibit 10.3) | 05/13/03 | 000-21696 |
| 10.4 | | Security Agreement - All Assets, dated as of March 12, 2003, by and between ARIAD Corporation and Citizens Bank of Massachusetts | | 10-Q (Exhibit 10.4) | 05/13/03 | 000-21696 |
| 10.5 | | Third Amended and Restated Term Note, dated March 26, 2008, issued by ARIAD Pharmaceuticals, Inc., ARIAD Corporation and ARIAD Gene Therapeutics, Inc. to RBS Citizens, National Association, successor by merger to Citizens Bank of Massachusetts | | 8-K (Exhibit 10.2.4) | 03/27/08 | 000-21696 |

| **Agreements with Respect to Collaborations, Licenses, Research and Development** | | | | | | |
|---|---|---|---|---|---|---|
| 10.6 | | Amended and Restated Agreement, dated as of December 12, 1997, between The Board of Trustees of The Leland Stanford Junior University and ARIAD Gene Therapeutics, Inc.* | | 10-K (Exhibit 10.14) | 03/10/98 | 000-21696 |
| 10.7 | | Revised and Restated Research and Development Agreement, dated as of March 15, 2002, by and between ARIAD Pharmaceuticals, Inc. and ARIAD Corporation | | 10-K (Exhibit 10.53) | 03/22/02 | 000-21696 |
| 10.8 | | License Agreement, effective January 26, 2005, by and between ARIAD Pharmaceuticals, Inc. and Medinol Ltd.* | | 10-Q (Exhibit 10.1) | 05/10/05 | 000-21696 |
| 10.9 | | Supply Agreement, entered into as of January 26, 2005, by and between ARIAD Pharmaceuticals, Inc. and Medinol Ltd.* | | 10-Q (Exhibit 10.2) | 05/10/05 | 000-21696 |
| 10.10 | | License Agreement, dated October 9, 2007, among ARIAD Pharmaceuticals, Inc., ARIAD Gene Therapeutics, Inc. and ICON Medical Corp.* | | 10-K (Exhibit 10.13) | 03/16/10 | 000-21696 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10.11 | | Amended and Restated Collaboration and Exclusive License Agreement, dated May 4, 2010, between ARIAD Pharmaceuticals, Inc. and Merck, Sharpe & Dohme Corp.* | | 10-Q (Exhibit 10.1) | 08/09/10 | 000-21696 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Agreements with Executive Officers and Directors** | | | | | | |
| 10.12 | | Amended and Restated Executive Employment Agreement, dated April 30, 2010, between ARIAD Pharmaceuticals, Inc. and Harvey J. Berger, M.D. + | | 8-K (Exhibit 10.1) | 05/03/10 | 000-21696 |
| 10.13 | | Amended and Restated Executive Employment Agreement, dated May 15, 2010, between ARIAD Pharmaceuticals, Inc. and David L. Berstein, Esq.+ | | 10-Q (Exhibit 10.4) | 08/09/10 | 000-21696 |
| 10.14 | | Amended and Restated Executive Employment Agreement, dated May 15, 2010, between ARIAD Pharmaceuticals, Inc. and Daniel M. Bollag, Ph.D.+ | | 10-Q (Exhibit 10.5) | 08/09/10 | 000-21696 |
| 10.15 | | Amended and Restated Executive Employment Agreement, dated May 15, 2010, between ARIAD Pharmaceuticals, Inc. and Timothy P. Clackson, Ph.D.+ | | 10-Q (Exhibit 10.6) | 08/09/10 | 000-21696 |
| 10.16 | | Amended and Restated Executive Employment Agreement, dated May 15, 2010, between ARIAD Pharmaceuticals, Inc. and Pierre F. Dodion, M.D., M.B.A.+ | | 10-Q (Exhibit 10.7) | 08/09/10 | 000-21696 |
| 10.17 | | Executive Employment Agreement, dated September 3, 2011, by and between ARIAD Pharmaceuticals, Inc. and Martin J. Duvall+ | | 10-Q (Exhibit 10.1) | 11/07/11 | 000-21696 |
| 10.18 | | Amended and Restated Executive Employment Agreement, dated May 15, 2010, between ARIAD Pharmaceuticals, Inc. and Edward M. Fitzgerald+ | | 10-Q (Exhibit 10.8) | 08/09/10 | 000-21696 |
| 10.19 | | Amended and Restated Executive Employment Agreement, dated May 1, 2010, by and between ARIAD Pharmaceuticals, Inc. and Frank G. Haluska, M.D., Ph.D.+ | | 10-Q (Exhibit 10.9) | 08/09/10 | 000-21696 |
| 10.20 | | Amended and Restated Executive Employment Agreement, dated May 15, 2010, between ARIAD Pharmaceuticals, Inc. and Raymond T. Keane, Esq.+ | | 10-Q (Exhibit 10.10) | 08/09/10 | 000-21696 |
| 10.21 | .1 | ARIAD Pharmaceuticals, Inc. 1997 Executive Compensation Plan+ | | 10-K (Exhibit 10.41) | 03/10/98 | 000-21696 |
| | .2 | Amendment to ARIAD Pharmaceuticals, Inc. 1997 Executive Compensation Plan+ | | 10-Q (Exhibit 10.2) | 11/09/05 | 000-21696 |
| 10.22 | | ARIAD Pharmaceuticals, Inc. 2005 Executive Compensation Plan (as amended and restated effective October 1, 2008)+ | | 10-K (Exhibit 10.31) | 03/16/09 | 000-21696 |
| 10.23 | | Director Compensation Arrangements+ | X | | | |
| 10.24 | | Form of Indemnity Agreement between ARIAD Pharmaceuticals, Inc. and its directors and officers+ | | 10-K (Exhibit 10.33) | 03/16/09 | 000-21696 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Equity Compensation Plans** | | | | | | |
| 10.25 | .1 | ARIAD Pharmaceuticals, Inc. 1991 Stock Option Plan for Employees and Consultants, as amended+ | | 10-K (Exhibit 10.13) | 03/31/95 | 000-21696 |
| | .2 | Amendment to the 1991 Stock Option Plan for Employees and Consultants+ | | 10-Q (Exhibit 10.36) | 08/12/97 | 000-21696 |
| 10.26 | | ARIAD Pharmaceuticals, Inc. 1991 Stock Option Plan for Directors+ | | 10 (Exhibit 10.15) | 04/30/93 | 000-21696 |
| 10.27 | .1 | ARIAD Pharmaceuticals, Inc. 1994 Stock Option Plan for Non-Employee Directors+ | | 10-K (Exhibit 10.24) | 03/31/95 | 000-21696 |
| | .2 | Amendment to the 1994 Stock Option Plan for Non-Employee Directors.+ | | 10-Q (Exhibit 10.37) | 08/12/97 | 000-21696 |
| 10.28 | | Amended and Restated ARIAD Pharmaceuticals, Inc. 1997 Employee Stock Purchase Plan+ | | Def 14A (Appendix A) | 04/30/09 | 000-21696 |
| 10.29 | | ARIAD Pharmaceuticals, Inc. 2001 Stock Plan, as amended and restated+ | | 10-Q (Exhibit 10.3) | 11/09/05 | 000-21696 |
| 10.30 | .1 | ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan, as amended+ | | Def 14A (Appendix A) | 05/02/11 | 000-21696 |
| | .2 | Form of Stock Option Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+ | X | | | |
| | .3 | Form of Stock Grant Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+ | X | | | |
| | .4 | Form of Restricted Stock Unit Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+ | X | | | |
| | .5 | Form of Restricted Stock Grant Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+ | X | | | |
| 21.1 | | Subsidiaries of ARIAD Pharmaceuticals, Inc. | X | | | |
| 23.1 | | Consent of Deloitte & Touche LLP | X | | | |
| 31.1 | | Certification of the Chief Executive Officer | X | | | |
| 31.2 | | Certification of the Chief Financial Officer | X | | | |
| 32.1 | | Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 | X | | | |

(+) Management contract or compensatory plan or arrangement.

(*) Confidential treatment has been granted by the Securities and Exchange Commission as to certain portions.