ARIAD®

2010 Annual Report

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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, 2010
OR
[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____
Commission file 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 Market
Rights to Purchase Series A Preferred Stock	

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the 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 [ ] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

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

Large accelerated filer [ ] Accelerated filer [X]
Non-accelerated filer [ ] (Do not check if a smaller reporting company) Smaller reporting company [ ]

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes [ ] No [X]

The aggregate market value of the 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 $253 million.

As of March 11, 2011, the registrant had 130,765,155 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 2011 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," "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 current treatment options for patients with cancer. Each of our product candidates – ridaforolimus, ponatinib, and AP26113 – was discovered internally by our scientists based on our expertise in cell-signaling, cancer biology and structure-based drug design. We believe that our product candidates have the potential to treat multiple cancer indications, and we anticipate pursuing broad development of each.

Our goal is to build a fully integrated oncology company. We are focused on building a commercial organization to market, distribute and sell our products upon regulatory approval in the United States and Europe. We have partnered with Merck & Co., Inc., or Merck, for the development and commercialization of our lead product candidate, ridaforolimus, now under an exclusive license and collaboration agreement, and are pursuing a regional partnering approach for our second product candidate, ponatinib, in selected markets outside the United States. Our goal in partnering is to maximize the commercial potential of our product candidates.

Our Product Candidates

Our pipeline of product candidates currently contains three compounds – ridaforolimus, ponatinib and AP26113 – each with the potential to treat multiple cancer indications.

Our lead cancer product candidate, ridaforolimus (previously known as deforolimus and, prior to that, AP23573), is an internally discovered, potent inhibitor of the protein mTOR. 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.

Ridaforolimus is being developed in conjunction with Merck. In July 2007, we entered into a global collaboration agreement, or the Collaboration Agreement, with Merck under which the parties shared responsibility for the development, manufacturing and commercialization of ridaforolimus. In May 2010, we entered into an amended and restated agreement with Merck, referred to as the License Agreement, that replaces the Collaboration Agreement and a related supply agreement. Under the terms of the License Agreement, we granted Merck an exclusive license to ridaforolimus for use in cancer, and Merck assumed responsibility for all activities related to the development, manufacturing and commercialization of ridaforolimus.

Merck is developing ridaforolimus in multiple cancer indications, both as a single agent and in combination with other targeted agents. In January 2011, we announced top-line data from a Phase 3 clinical trial of ridaforolimus in patients with metastatic soft-tissue and bone sarcomas showing that

ridaforolimus met the primary endpoint of improved progression-free survival, or PFS, compared to placebo. This clinical trial remains active, and patients continue to be followed to gather additional data on secondary endpoints, including overall survival and safety. Merck has indicated its intention to file for marketing approval of ridaforolimus for patients with metastatic sarcomas in 2011, subject to final collection and analysis of all available data from the trial. In accordance with our License Agreement with Merck, we have elected to exercise our option to co-promote ridaforolimus for the sarcoma indication upon approval in the United States. Details of the co-promotion will be finalized in a co-promotion agreement to be negotiated by the parties. In addition, Merck is currently continuing development of ridaforolimus, as both a single agent and in combination with other agents, in Phase 1 and Phase 2 clinical trials in a variety of other cancer indications.

Ridaforolimus is also being developed pursuant to license agreements with medical device companies for use on drug-eluting stents to prevent restenosis, or reblockage, of injured vessels following interventions in which stents are used in conjunction with balloon angioplasty. We have entered into two such license agreements to date, one with Medinol Ltd., or Medinol, and another with ICON Medical Corp., or ICON, and have retained the right to enter into one additional non-exclusive agreement in this area.

Our second product candidate, 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 and is wholly owned by us. We are currently evaluating ponatinib in a 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 in this setting. Patient enrollment in this trial is progressing as planned and we expect to complete patient enrollment by year-end 2011. We intend to retain our rights to commercialize ponatinib in the United States and potentially in Europe and are pursuing a regional partnering approach in select markets outside the United States.

Our third product candidate, AP26113, is an investigational anaplastic lymphoma kinase, or ALK, inhibitor that we believe has the potential to regulate multiple cancer pathways and to be used in the treatment of certain patients with various cancers, including non-small cell lung cancer, lymphoma and neuroblastoma. We are conducting preclinical testing and other studies that will be required for an investigational new drug application, or IND, and anticipate submitting an IND by mid-2011 and beginning a Phase 1 clinical trial shortly thereafter.

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 ridaforolimus, ponatinib and AP26113, to treat life-threatening diseases.

Our Lead Development Programs

Potential Oncology Indications of our mTOR Inhibitor, Ridaforolimus

Human cells, both healthy and malignant, share an elaborate system of molecular pathways that carry signals back and forth from the cell surface to the nucleus and within the cell. Such signaling is essential to cell functioning and viability. When disrupted or over-stimulated, such pathways may trigger diseases such as cancer. For example, growth and proliferation of cancer cells are dependent on signals from external growth factors, as well as signals indicating the availability of sufficient nutrients and blood supply. These signals are conveyed along well-defined pathways, several of which are regulated by the protein called the mammalian target of rapamycin, or mTOR.

Our lead cancer product candidate, ridaforolimus, is an internally discovered, potent mTOR inhibitor. 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 clinical trials to date, ridaforolimus has been well tolerated at the doses administered, and adverse events were generally mild to moderate in severity and manageable.

The most advanced potential indication and initial registration path for ridaforolimus is in patients with soft-tissue and bone sarcomas. In September 2007, we initiated our first Phase 3 clinical trial of ridaforolimus in patients with metastatic soft-tissue and bone sarcomas. The SUCCEED (**S**arcoma **U**lti-**C**enter **C**linical **E**valuation of the **E**fficacy of **R**i**d**aforolimus) trial 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 have an agreement with the U.S. Food and Drug Administration, or FDA, on a Special Protocol Assessment, or SPA, for the SUCCEED trial. The European Medicines Agency, or EMA, has provided protocol advice consistent with that of the FDA regarding the trial design as part of its Protocol Assistance program.

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. Based on the full analysis of 552 PFS events in 711 patients, determined by an independent review committee, the trial achieved its primary endpoint, with a statistically significant 28 percent reduction by ridaforolimus in the risk of progression compared to placebo. Determination of median PFS for each arm of the trial demonstrated that ridaforolimus treatment resulted in a statistically significant 21 percent (3.1 week) improvement in median PFS (ridaforolimus, 17.7 weeks *vs.* placebo, 14.6 weeks). Based on the full analysis of PFS determined by the investigative sites, there also was a statistically significant 31 percent reduction by ridaforolimus in the risk of progression compared to placebo. Ridaforolimus treatment resulted in a statistically significant 52 percent (7.7 week) improvement in median PFS (ridaforolimus, 22.4 weeks *vs.* placebo, 14.7 weeks).

The most common side effects observed in the study to date 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 currently plans to file for marketing approval of oral ridaforolimus for patients with metastatic sarcomas in 2011, subject to final collection and analysis of all available data from the trial.

The FDA and the EMA have designated ridaforolimus as an orphan drug for treatment of soft-tissue and bone sarcomas. The FDA has also designated ridaforolimus as a fast-track product for the same potential indication.

We also announced in the fourth quarter of 2010 interim results of a randomized, open-label, active control Phase 2 clinical trial of ridaforolimus in patients with metastatic or recurrent endometrial cancer. The interim analysis was based on 114 patients enrolled at 39 sites in North America and Europe. Patients in the trial were randomized to receive ridaforolimus (n=57), or either oral progestin (n=48) or chemotherapy (n=9), both of which are standard treatments in patients with advanced endometrial cancer in the second line setting. The interim analysis demonstrated a significant improvement in PFS with a statistically significant 1.7 month difference in median PFS (ridaforolimus, 3.6 months; standard of care, 1.9 months). The interim analysis also showed that the most common adverse events observed with ridaforolimus were mucositis, stomatitis and hyperglycemia, which have been observed in previous studies and are considered to be class effects of mTOR inhibitors. Overall, patients treated with ridaforolimus had significantly more serious adverse events than patients treated with the standard of care. Based on the data indicating a statistically significant improvement in the trial's primary endpoint

of PFS, we announced that Merck had stopped further enrollment in the trial while continuing to follow surviving patients.

In addition to these trials, Merck continues to develop ridaforolimus, as both a single agent and in combination with other agents, in Phase 1 and Phase 2 clinical trials in a variety of other cancers.

Potential Cardiovascular Indications of our mTOR Inhibitor, Ridaforolimus

As an mTOR inhibitor, ridaforolimus has also been shown 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. Recent 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, a leading innovator in stent technology, in January 2005, and with 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 ICON and Medinol, to develop and commercialize medical devices delivering ridaforolimus for use in vascular disease.

Our Pan BCR-ABL Inhibitor, Ponatinib

Our second oncology product candidate, ponatinib (previously known as AP24534), 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 to date from preclinical studies and a Phase 1 clinical trial show that ponatinib potently inhibited BCR-ABL, a target protein associated with drug-resistant chronic myeloid leukemia, or CML, as well as various mutants of BCR-ABL.

Preclinical studies showed that ponatinib demonstrated efficacy and oral dosing flexibility in animal models of CML, including forms of CML caused by clinically relevant mutants of the target protein, 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, ponatinib has demonstrated in preclinical studies 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, 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 December 2010, we announced updated clinical data from this fully enrolled and ongoing Phase 1 trial. The data demonstrate strong clinical evidence of hematologic, cytogenic and molecular anti-cancer activity in patients with CML, including those with the T315I mutation. In particular, the data

demonstrate that in chronic phase CML patients treated with ponatinib, 66 percent of patients in the trial achieved a major cytogenetic response, including 100 percent of patients who also had the T315I mutation. The data from this trial also show that ponatinib continues to be well-tolerated and to produce beneficial and durable anti-leukemia activity in patients who had failed prior tyrosine kinase inhibitor therapy for CML, including patients with the T315I mutation.

In September 2010, we initiated patient enrollment in a pivotal Phase 2 clinical trial of ponatinib 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 in this setting. The PACE trial is a global, single-arm clinical study of oral ponatinib in 320 patients with chronic phase, accelerated phase, or blast phase CML as well as Ph+ ALL. Patients resistant or intolerant to dasatinib (Sprycell®) or nilotinib (Tasigna®), or with the T315I mutation, will be enrolled. Patients will be 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 will be 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. Patient enrollment in this trial is progressing as planned, and we expect to complete patient enrollment by year-end 2011.

In order to be able to obtain regulatory approval to market ponatinib specifically with an indication for patients with the T315I mutation, we expect that the FDA will require there to be an FDA-approved diagnostic test that identifies patients who have the T315I mutation. We plan to collaborate with one or more companies to provide for the development and commercialization of such a diagnostic test coincident with our development of ponatinib and our goals to gain regulatory approval for this indication. We also plan to seek regulatory approval for ponatinib for patients who are resistant or intolerant to other tyrosine kinase inhibitors and may not have the T315I mutation. For this indication a companion diagnostic test is not required.

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 acute lymphoblastic anemia.

Our Anaplastic Lymphoma Kinase Inhibitor, AP26113

Our third oncology product candidate, AP26113, is an internally discovered small-molecule anaplastic lymphoma kinase, or ALK, inhibitor that targets a unique genetic feature of cancer cells similar to ponatinib.

ALK was first identified as a chromosomal rearrangement in anaplastic large cell lymphoma, or ALCL. Genetic studies now indicate that abnormal expression of ALK is a key driver of certain types of non-small cell lung cancer and neuroblastoma, as well as ALCL. Since ALK is generally not expressed in normal adult tissues, we believe that it represents a highly promising target for molecularly targeted cancer therapy.

In preclinical studies to date, AP26113 has been shown to have significantly higher potency than the investigational ALK inhibitor crizotinib being developed by Pfizer, and to inhibit mutant forms of ALK that are resistant to crizotinib, which is currently in clinical trials in patients with cancer. We are currently conducting preclinical testing and IND-enabling studies of this product candidate and anticipate submitting an IND by mid-2011 and beginning a biomarker-based clinical trial in patients with tumors including non-small cell lung cancer shortly thereafter.

Our Discovery Programs

Our research and development programs are focused on discovering and developing small-molecule drugs that regulate cell signaling. 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. From our inception, our research has focused on exploring cell-signaling pathways, identifying their role in specific diseases, and discovering drug candidates to treat those diseases 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 targets. Product candidates like ridaforolimus, ponatinib and AP26113 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. We file patent applications to protect our technology, inventions and improvements to our inventions that are considered important to the development of our business.

As of February 28, 2011, we owned, co-owned or held an exclusive license to 62 U.S. patents and 23 pending U.S. patent applications together with their various foreign counterparts. We also have several nonexclusive technology licenses from certain institutions in support of our research programs, and may seek additional such licenses where applicable technology complements our research and development efforts.

Our mTOR inhibitor, ridaforolimus, and its production are covered by two of our issued U.S. patents. Those patents and foreign counterparts are expected to expire in 2023. Patents that may issue based on other pending applications would provide in some cases up to seven years of additional patent protection for covered therapeutic uses of ridaforolimus.

Our multi-targeted kinase inhibitor, ponatinib, and our ALK inhibitor, AP26113, are each covered by pending patent applications that are expected to provide patent protection through late 2026 and mid-2029, respectively. In both cases, other pending patent applications relating to therapeutic uses of the respective inhibitors are expected to provide additional patent protection into 2030.

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. Our ARGENT technologies allow 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.

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 & Co., Inc.

In July 2007, we entered into a collaboration agreement with Merck for the joint global development, manufacture and commercialization of ridaforolimus, our lead product candidate, for use in cancer, referred to as the Collaboration Agreement. In May 2010, we entered into an amended and restated agreement with Merck for ridaforolimus, referred to as the License Agreement, which replaced the Collaboration Agreement and a related supply 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 we 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, except that Merck funded 100 percent of any cost of development specific to development or commercialization of ridaforolimus outside the United States. Under the Collaboration Agreement, we were responsible for supplying the active pharmaceutical ingredient used in the product and Merck was responsible for the formulation of the finished product, all under a separate supply agreement between the parties entered into in May 2008.

The Collaboration Agreement provided that, in the United States, we and Merck would co-promote the product, we would distribute and sell the product for all cancer indications and record all sales, and each party would receive 50 percent of the profit from such sales. Outside the United States, Merck would distribute, sell and promote the product and record all sales, and Merck would pay us tiered double-digit royalties on such sales. Royalties would be payable by Merck, on a country by country basis, until the later of (i) the expiration of the last valid claim of any patent rights owned by either us or Merck that cover the product, (ii) a specified number of years from first commercial sale, or (iii) the last date upon which we supply the active pharmaceutical ingredient to Merck under the supply agreement, subject to partial reduction in certain circumstances.

Under the terms of the Collaboration Agreement, Merck paid us an initial up-front payment of $75 million in July 2007, and agreed to pay up to $652 million in milestone payments, of which $53.5 million had been paid up to May 4, 2010, based on the successful development of ridaforolimus in multiple potential cancer indications, and achievement of specified product sales thresholds. Merck had also agreed to provide us with up to $200 million in interest-bearing, repayable, development cost advances to cover a portion of our share of global costs, after we had paid $150 million in global development costs and had obtained regulatory approval to market ridaforolimus from the FDA in the United States or similar regulatory authorities in Europe or Japan.

The License Agreement (May 2010 to present)

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 fund 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 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 to be negotiated by us and Merck.

Under the License Agreement, Merck paid us an initial up-front fee of $50 million in May 2010 and has agreed to pay us 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. These potential milestone payments include up to $65 million associated with potential regulatory filings and approvals for the sarcoma indication, for which we announced positive Phase 3 results in January 2011 and for which Merck has indicated its intention to file for marketing approval in 2011 (consisting of $25 million for acceptance of filing of a new drug application by the FDA, $25 million for marketing approval in the United States, $10 million for marketing approval in Europe, and $5 million for marketing approval 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. These milestone payments replace the remaining unpaid milestone payments provided for in the Collaboration Agreement.

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 substantially completed in the fourth quarter of 2010. Merck may request that we provide additional services, which we can provide at our election. Merck agreed to pay us for our internal transition services at agreed upon rates and to reimburse us for all external costs incurred in connection with transition services or research and development activities.

Pursuant to this License Agreement, in addition to the $50 million up-front payment from Merck, we have also received from Merck 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.

Our Stent Collaborations

Medinol Ltd.

In January 2005, we entered into a license agreement with Medinol Ltd., or 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 allows Medinol to distribute products resulting from the agreement worldwide through distributors authorized by us. We have entered into a similar non-exclusive license agreement with ICON Medical Corp., as described further below, and we have retained the right to enter into one additional non-exclusive license agreement with an additional third party to develop and commercialize stents and certain other medical devices to deliver ridaforolimus for use in vascular disease.

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, 2010, 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, 2010, no products have been approved by regulatory authorities for sale under this agreement.

The term of the agreement extends to the later to occur of the expiration of our patents relating to the rights licensed to Medinol under the agreement or 15 years after the first commercial sale of a product. The agreement may be terminated by either party for breach following the failure to cure after a 90-day cure period. In addition, Medinol may terminate the agreement 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 agreement upon 30 days' notice to Medinol, if we determine that it is no longer in our business interest to continue our development and regulatory approval efforts with respect to ridaforolimus.

The agreement also provides for periodic reporting of progress, sharing of relevant clinical and non-clinical data, assistance in resolution of technical and regulatory issues and, if a product is approved, timely reporting of sales and remittance of royalty payments.

ICON Medical Corp.

In October 2007, we entered into a license agreement with ICON Medical Corp., or 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, 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 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. We have entered into a similar non-exclusive license agreement with Medinol, as described above, and we have retained the right to enter into one additional non-exclusive license agreement with an additional third party to develop and commercialize stents and certain other medical devices to deliver ridaforolimus for use in vascular disease.

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% and certain percentage maintenance, anti-dilution, registration and other 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, 2010, 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, 2010, no products have been approved by regulatory authorities for sale under this agreement.

The term of the agreement extends to the later to occur of the expiration of our patents relating to the rights licensed to ICON under the agreement or 15 years after the first commercial sale of a product. The agreement may be terminated by either party for breach following the failure to cure after a 90-day cure period. In addition, ICON may terminate the agreement 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 agreement upon 30 days' notice to 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.

The agreement also provides for periodic reporting of progress, sharing of relevant clinical and non-clinical data, assistance in resolution of technical and regulatory issues and, if a product is approved, timely reporting of sales and remittance of royalty payments.

Other Licenses to Third Parties

We have a program to license our ARGENT cell-signaling regulation technologies to pharmaceutical and biotechnology companies to develop and commercialize innovative therapeutic products and to conduct drug discovery research. To date, we have entered into several licenses for use of our ARGENT cell-signaling regulation technologies for a variety of applications, including the development of therapeutic vaccines and gene and cell therapy products and for use in drug discovery. In addition, several biotechnology companies have conducted collaborative studies of these technologies for use in gene and cell therapy applications.

Our Licenses from Third Parties

ARGENT Cell-Signaling Regulation Technologies

In December 1997, we entered into an amended and restated exclusive license agreement with Stanford University (on behalf of itself and Harvard University, collectively "Stanford"), pursuant to which we became the exclusive licensee of certain technology and patent rights to our ARGENT cell-signaling

regulation technologies, which includes materials and methods for regulating the transcription of specific genes in vivo.

Concurrent with our execution of this agreement, we issued an aggregate of 128,571 shares of common stock of our former subsidiary AGTI, which was merged into us in September 2008, to Stanford. The agreement required us to pay Stanford an up-front license issue fee, as well as payments based upon achievement of certain clinical, regulatory and commercial milestones. Through December 31, 2010, we have paid Stanford $870,000 under this agreement. In addition, we are obligated to pay Stanford single-digit royalties based on net sales of any products and processes developed using the ARGENT cell-signaling regulation technologies, including therapies and research reagents. As of December 31, 2010, no products or processes have been developed using the ARGENT cell-signaling regulation technologies and approved for sale.

The initial term of the agreement extends to 12 years after the first commercial sale of a product resulting from technology licensed under the agreement, augmented by any patent term extension awarded in connection with the patents licensed under the agreement. The agreement further extends for multi-year terms, unless Stanford demonstrates that we are not diligently pursuing the commercialization of the technologies licensed under the agreement. The agreement may be terminated by Stanford upon a material breach by us, including failure to pay royalties owed under the agreement, following our failure to cure after a 60-day cure period. We may terminate the agreement upon 30 days' written notice to Stanford and payment of all amounts due to Stanford through the effective date of termination.

We have also entered into other license agreements with various institutions and universities pursuant to which we are the licensees of certain technologies relating to our research and development programs. In some instances, our license agreements from third parties also impose insurance, development, sublicensing and other obligations on us. Failure by us to comply with these requirements could result in the termination of the applicable agreement, which, depending upon the technologies which are the subject of the applicable agreement, could have a material adverse effect on our business, financial condition, and results of operations.

Research and Development Spending

During each of the three years ended December 31, 2010, 2009 and 2008, we spent approximately $58.0 million, $63.4 million and $50.8 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.

Our lead product candidate, 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.

Our second product candidate, ponatinib, is also produced by an established manufacturing process using conventional organic chemical synthesis. The production of ponatinib is based on technology that we believe is proprietary to us.

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 & Co., Inc., Merck KGaA, Novartis AG, and Pfizer, Inc., are developing and marketing drugs to treat cancer. Biotechnology companies such as Amgen Inc., Onyx Pharmaceuticals, Inc. and Astellas Pharma Inc., are developing and, in some cases, marketing drugs to treat various diseases, including cancer, by inhibiting cell-signaling pathways.

Pfizer, Inc. and Novartis AG 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 subependymal giant cell astrocytoma associated with tuberous sclerosis. Other companies have products on the market or in development against which ridaforolimus, if approved, may have to 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 Pharmaceutical Co., Ltd. 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.

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. Other companies, including Pfizer and Chemgenex Pharmaceuticals, have drugs to treat CML in various stages of development.

Several companies have ALK inhibitors in various stages of development that could compete with AP26113. Pfizer is conducting a registration clinical trial of its product candidate, crizotinib, in patients with ALK-positive non-small cell lung cancer. Novartis, Chugai Pharmaceutical Co. and Astellas also have ALK inhibitors in early-stage development.

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 new drug application, or 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 investigational new drug application, or 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(s) 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 points are 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. We have an SPA with the FDA for our Phase 3 SUCCEED trial.

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. The FDA granted two orphan drug designations for ridaforolimus; the first for the treatment of soft tissue sarcoma and the second for the treatment of bone sarcoma. The FDA also granted orphan drug designation for ponatinib for the treatment of CML and Philadelphia chromosome-positive acute lymphoblastic leukemia.

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. 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 post-NDA approval, or Phase 4, testing which involves 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.

Regulation of Companion Diagnostic Devices

Diagnostic tests may be used in the determination of whether a drug should be prescribed for a patient. In the United States, when the therapeutic decision involves a high level of risk, the FDA may designate such tests as medical devices regulated by the FDA's Center of Devices and Radiological Health requiring the submission of a Premarket Approval Application, or PMA. In order to enable marketing of a drug for an indication requiring such a test, approval of the PMA by the FDA will be required. Approval of the PMA requires the manufacturer of the diagnostic test to demonstrate analytical and clinical validity for the test. The manufacturer will be required to comply with quality system regulations applicable to a medical device and the manufacturer's site and manufacturing process will be subject to inspection by the FDA. We expect that in order to market ponatinib specifically for patients with the T315I mutation of the BCR-ABL gene, among other indications, we will be required to have an FDA-approved diagnostic test that identifies such patients, and we therefore will be reliant on another company to develop and gain regulatory approval for such test.

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, with devices in Class I being those with the lowest perceived level of risk and those in Class III with the highest level.

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.

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 partners 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 U.S., the European Union may grant orphan drug status for specific indications if the request is made before an application for marketing authorization is made. The European Union 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. We have been granted orphan designation in the European Union for ridaforolimus for the treatment of soft tissue sarcoma and bone sarcoma, and for ponatinib for the treatment of CML and ALL.

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.

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 28, 2011, we had 122 employees, 78 of whom hold post-graduate medical or science degrees, including 43 with a Ph.D. or M.D. Most of our employees are engaged directly in research and development. 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 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 in May 2010, we have incurred significant losses since our formation in 1991, and have an accumulated deficit of $433.4 million at December 31, 2010. Our losses have resulted principally from costs incurred in research and development of our product candidates, including clinical development of ridaforolimus and ponatinib, and from general and administrative costs, including costs incurred to prosecute and protect our intellectual property, associated with our operations. It is likely that we will incur significant operating losses for the foreseeable future, as we continue our research and development activities and begin 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 partners or potential future partners 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 partners 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, 2010, we had cash and cash equivalents of $103.6 million. We estimate that our cash used in operations in 2011 will be in the range of $53 million to $56 million and that our net use of cash will be in the range of $41 million to $44 million. These estimates assume receipt of a $25 million milestone payment from Merck in 2011 for the acceptance by the FDA of a new drug application for ridaforolimus in patients with metastatic sarcomas. 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 other product candidates. We will also require funding for our other operating expenses (including intellectual property protection and enforcement) as well as capital expenditures to maintain and improve our facility, equipment and systems.

We have the opportunity to receive milestone payments from Merck in an amount of up to $65 million related to regulatory filing and approvals of ridaforolimus in sarcomas, which could occur in 2011 or 2012, as well as funding from a potential partnering transaction related to ponatinib outside the United States. However, we may not receive these payments and funding in the timeframes we currently anticipate, or at all. We also have, at December 31, 2010, outstanding warrants to purchase 9,563,610 shares of our common stock at an exercise price of $2.15 per share, which expire on February 25, 2012. Of this amount, warrants to purchase 2,962,500 shares have been exercised in January and February of 2011

for proceeds of $6.4 million. Although we are eligible to receive up to an additional $14.2 million if the remaining warrants are exercised, there can be no assurance that the warrants will be exercised before they expire in February 2012.

In addition, we may from time to time access funding by issuing common stock or other securities in private placements or public offerings, including under our universal shelf registration statement under which we currently have $65.8 million in securities available for issuance. We may also from time to time seek additional funding from other product-based collaborations such as partnering of our product candidates ponatinib and AP26113, technology licensing, or the issuance of debt. However, such additional funding may not be available on terms acceptable to us, or at all.

Accordingly, we may not be 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. If we cannot secure adequate funding from these or other sources, we may be required to reduce our operations, to delay, scale back, eliminate or terminate clinical trials for one or more of our other research and development programs, or to enter into licenses, settlements or other arrangements with third parties, on terms that may be unfavorable to us, 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, 2010, we had $9.6 million outstanding under a term loan agreement with a bank, which agreement was amended in January 2011 to increase the loan balance to $14.0 million and extend our quarterly payments through December 31, 2015. 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 the Discovery, Development and Commercialization of Our Product Candidates

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

We are a biopharmaceutical company focused on the discovery and development of drugs to provide therapeutic intervention in treating human diseases at the cellular level. As with all scientific endeavors, we face much trial and error, and we and our partners may fail at numerous stages along the way, which would inhibit us and our partners from successfully developing, obtaining approval for and marketing our drug candidates.

We do not currently have any products on the market and have no product revenues. Our lead product candidate, ridaforolimus, is currently being developed by our partner Merck for potential cancer indications and by our partners, Medinol and ICON, for use in stents or other medical devices to reduce reblockage of injured vessels following interventions in which stents are used in conjunction with balloon angioplasty. Ridaforolimus is currently being studied in a Phase 3 clinical trial in patients with metastatic sarcomas and in multiple Phase 1 and Phase 2 clinical trials in various other cancer indications and in combination with other agents. Our second product candidate, ponatinib, is currently being studied in Phase 1 and Phase 2 clinical trials in patients with hematologic malignancies. Our third product candidate, AP26113, is currently in preclinical testing and investigational new drug, or IND, enabling studies. We anticipate submitting an IND by mid-year 2011 and beginning a Phase 1 clinical trial shortly thereafter. Therefore, our success is substantially dependent on (1) the ability of Merck to obtain marketing approval for ridaforolimus for metastatic sarcoma and other cancer indications, (2) the ability of our partners, Medinol and ICON, to obtain marketing approval for stents or other medical devices delivering ridaforolimus, and (3) our ability to successfully complete clinical development and obtain marketing approval for ponatinib, AP26113 and our other product candidates, or enter into collaboration agreements for these product candidates on terms favorable to us.

We and our partners have yet to submit any applications for marketing approval for ridaforolimus, ponatinib or any of our other product candidates to the FDA or foreign regulatory authorities. Factors which could affect the ability to obtain regulatory approval and to achieve market acceptance and gain market share for ridaforolimus, ponatinib and any other product candidate of ours 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 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.

We do not expect to have any products on the market before 2012, at the earliest, and ultimately we and our partners may not succeed in developing or commercializing any products which will generate revenues for our company. If we and our partners are not successful in developing or marketing ridaforolimus or our other 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.

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 early-stage development. Accordingly, the results to date from preclinical studies and clinical trials for ridaforolimus and ponatinib may not be predictive of the results to be obtained from ongoing or future clinical trials. Furthermore, potential competitive commercial factors may influence future decisions and directions by us or our partners on which clinical indications to pursue and when. If we or our partners are required to conduct

additional clinical trials or other testing of our product candidates beyond those currently contemplated, we or our partners 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 earn additional development or regulatory milestones or royalties or generate product revenues.

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 partners, 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 partners are focused.

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. In particular, we are aware that Pfizer and Novartis have mTOR inhibitors on the market which are competitive with ridaforolimus, our lead product candidate. Decisions taken by either of these parties regarding clinical initiatives, including Phase 3 trials, of their mTOR inhibitors may impact or block the clinical and commercial opportunities available to us and Merck for ridaforolimus. Additionally, PharmaMar has a marine derived antitumoral agent currently approved for the treatment of soft tissue sarcomas in Europe and Takeda Pharmaceutical Co., Ltd. has mifamurtide, an immunotherapy product approved for treatment of bone sarcomas in Europe. By virtue of having or introducing competitive products on the market before us, these entities may gain a competitive advantage. 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.

Although Merck has responsibility under our May 2010 License Agreement for all sales and marketing activities for our lead product candidate, ridaforolimus, we have an option to co-promote ridaforolimus in the United States, which we have elected to exercise for the sarcoma indication, and we currently intend to retain our rights to commercialize our other product candidates, including ponatinib, in the United States and potentially in Europe. We have no experience in marketing or selling any products or with respect to 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. While we intend to stage our commitments to the extent possible in consideration of the development timelines, in order to support an effective launch of any product, we will need to make significant financial commitments to our marketing organization prior to receiving regulatory approval.

We will need to 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, directly or indirectly, 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 any of 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; and 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 partners 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 partners may develop.

Risks Relating to Our Dependence on Third Parties

Because we have licensed our lead product candidate, ridaforolimus, to Merck, we are dependent on Merck for the successful development and commercialization of ridaforolimus.

We have entered into a license agreement with Merck for the development and commercialization of ridaforolimus, and we may enter into additional such licenses or collaborations for our other product candidates. Among other provisions, Merck is responsible for the development of ridaforolimus in multiple oncology indications. We will depend heavily on Merck for the successful development and

commercialization of ridaforolimus. We would expect to be dependent upon other partners, if we enter into arrangements with one or more of them, to successfully develop and commercialize our other product candidates, including ponatinib. 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 or that we will be able to secure any other partners for ponatinib or our other product candidates on terms favorable to us, or at all.

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 have limited experience in conducting clinical trials and are dependent upon the ability of third parties, including Merck, 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. Our License Agreement with Merck provides that Merck is responsible for the conduct of clinical trials of ridaforolimus in multiple cancer indications. As such, we are heavily dependent on Merck's decisions to initiate and continue clinical development of ridaforolimus and, for indications it chooses to pursue, its ability to successfully initiate, enroll, conduct and monitor clinical trials. We are also dependent upon the ability of Merck to timely and accurately collect and report to regulatory authorities worldwide the patient data generated in the SUCCEED trial and other clinical trials of ridaforolimus. Merck may not effectively initiate clinical trial sites, recruit and enroll patients, conduct and monitor clinical trials, and to collect and report patient data relating to the SUCCEED trial or other clinical trials of ridaforolimus, either generally or in specific countries.

We are conducting Phase 1 and Phase 2 clinical trials of ponatinib in patients with hematologic malignancies. We do not currently have a partner for the development and commercialization of ponatinib, although we have announced that we may seek a partner outside the United States for this product candidate. 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 of ponatinib, including the ongoing 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, including Merck, to manufacture our product candidates.

Under our License Agreement with Merck, Merck is responsible for providing the active pharmaceutical ingredient used in ridaforolimus drug product and for the formulation of the finished product. Under our agreements with Medinol and ICON, we are responsible for providing the ridaforolimus to be delivered by the stents or medical devices being developed by Medinol and ICON. 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, including Merck, 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 current good manufacturing practices, or 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, including ridaforolimus. 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.

We are dependent upon the ability of our medical device partners 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 partners 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 partners 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 partners 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. Their ability to conduct clinical trials and commercialize such medical devices will be dependent on both the safety profile of their medical devices and ridaforolimus, as well as their ability to manufacture and supply medical devices for clinical trials and marketing purposes and our ability to manufacture and supply ridaforolimus, either directly or through third parties, at a competitive cost and in accordance with cGMPs and other regulatory requirements. Although, under our License Agreement with Merck, Merck is responsible for the supply of ridaforolimus as a finished drug product for potential indications covered by the license, we depend upon Merck and third-party manufacturers or collaborative partners for the production of ridaforolimus for clinical trials to be conducted by our medical device partners, and we intend to rely on Merck or third-party manufacturers to produce ridaforolimus on a commercial scale for these medical devices, if any medical device partner receives regulatory approval. Our reliance on third-party manufacturers and their potential inability to meet our supply commitments to one or more of our partners could adversely impact the ability of our partners to commercialize stents or other medical devices to deliver ridaforolimus.

We may be reliant on a medical device manufacturer to develop and commercialize 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 of the BCR-ABL protein are being 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, we expect that the FDA will require there to 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 plan to collaborate with one or more companies to provide for the development and commercialization of such a companion diagnostic test.

If we are not successful in establishing a collaboration with a company for the development and commercialization of a companion diagnostic test for the T315I mutation, or if a company with whom we establish a collaboration 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.

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. For example, if our License Agreement with Merck does not result in the development or approval of any product candidates, our business could be adversely affected. 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

- if it has marketing rights, 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.

We and our licensors have issued patents and pending patent applications covering research methods useful in drug discovery, new chemical compounds discovered in our drug discovery programs including, among others, ridaforolimus, certain components, configurations and uses of our cell-signaling regulation technologies and 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. Moreover, a number of our competitors have developed technologies, filed patent applications or obtained patents on technologies, compositions and methods of use that are related to our business and may cover or conflict with our patent applications, technologies or product candidates. 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, or at all. 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.

We anticipate that Merck and our medical device partners will seek to develop and commercialize ridaforolimus and ridaforolimus-eluting stents in a manner that does not infringe third-party patents. However, there can be no assurance that any products that may be marketed by our partners will not be subject to third-party claims. Furthermore, the patents issued to us or our partners covering ridaforolimus and/or medical devices, including stents, may be subject to challenge and may be subsequently narrowed, invalidated or circumvented. Any such event would adversely impact the ability of one or more of our partners to market ridaforolimus or stents or other medical devices to deliver ridaforolimus.

We may be unable to develop or commercialize our product candidates if we are unable to obtain or maintain certain licenses on commercial terms or at all.

We have entered, and will continue to enter, into agreements with third parties to test compounds, blood and tissue samples, to perform gene expression analysis and to develop biological tests for use with our product candidates, which testing may yield new inventions and discoveries requiring us to obtain licenses in order to exclusively develop or market new products, alone or in combination with our product candidates, or to develop or market our product candidates for new indications. We have also entered into license agreements for some of our technologies. We use third parties to test blood and tissue samples and other biological materials in our clinical programs and to develop biological tests, with respect to which we may be required to obtain licenses or pay royalties or other fees in order to commercialize such tests for use with our product candidates. Manufacturing and/or use of our products may also require licensing biological materials, technologies and intellectual property from third parties. Our inability to obtain any one or more of these licenses, on commercially reasonable terms, or at all, or to circumvent the need for any such license, could cause significant delays and cost increases and materially affect our ability to develop and commercialize or prevent us from developing and commercializing our product candidates. Obtaining licenses for these discoveries, materials and

technologies may require us to make cumulative royalty payments or other payments to several third parties, potentially reducing amounts paid to us or making the cost of our products commercially prohibitive.

Some of our licenses obligate us to exercise diligence in pursuing the development of product candidates, to make specified milestone payments and to pay royalties. In some instances, we are responsible for the costs of filing and prosecuting patent applications and actions to enforce our rights against infringers. These licenses generally expire upon the earlier of a fixed term of years after the date of the license or the expiration of the applicable patents, but each license is also terminable by the other party upon default by us of our obligations. Our inability or failure to meet our diligence requirements or make any payments required under these licenses would result in a reversion to the licensor of the rights granted which, with respect to the licenses pursuant to which we have obtained exclusive rights, would materially and adversely affect our ability to develop and market products based on our licensed technologies.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would 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, corporate 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 all of 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 would 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.

Our performance as a specialized scientific business is substantially dependent on our key officers and members of our scientific staff responsible for areas such as drug development, clinical trials, regulatory affairs, drug discovery, manufacturing, marketing, business development and intellectual property protection and licensing. We also are dependent upon certain of our scientific advisors to assist in formulating our research and development strategy. 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 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.

We expect to expand our development, regulatory and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

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. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional

qualified personnel. As a result of our limited financial resources and the inexperience of our management team in managing a company with such anticipated growth, we may not be able to manage the expansion of our operations effectively or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources from the running of our business. 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.

Risks Relating to Regulatory Approvals, Pricing and Reimbursement

We have limited experience in conducting clinical trials, which may cause delays in commencing and completing clinical trials of our product candidates.

Clinical trials must meet applicable FDA and foreign regulatory requirements. We have limited experience in designing, conducting and managing the preclinical studies and clinical trials necessary to obtain regulatory approval for our product candidates in any country and no experience in conducting and managing post-approval studies of any products. We or our collaborative partners may encounter problems in clinical trials that may cause us or the FDA or foreign regulatory agencies to delay, suspend or terminate our clinical trials at any phase. These problems could include the possibility that we may not be able to manufacture sufficient quantities of cGMP materials for use in our clinical trials, conduct clinical trials at our preferred sites, enroll a sufficient number of patients for our clinical trials at one or more sites, or begin or successfully complete clinical trials in a timely fashion, if at all. Furthermore, we, our partners, the FDA or foreign regulatory agencies may suspend clinical trials of our product candidates at any time if we or they believe the subjects participating in the trials are being exposed to unacceptable health risks, whether as a result of adverse events occurring in our trials or otherwise, or if we or they find deficiencies in the clinical trial process or conduct of the investigation. If clinical trials of any of our product candidates fail, we or our partners will 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 partners, 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, neither we nor our partners have submitted a marketing application for any of our product candidates to the FDA or any foreign regulatory agency, and 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 partners 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. Even though we have obtained orphan drug designation from the FDA and EMEA for ridaforolimus in bone and soft-tissue sarcomas and for ponatinib in certain indications, the designation-related marketing exclusivity periods may be challenged by others or may prove to be of no practical benefit. In addition, even though we have reached agreement on a Special Protocol Assessment, or SPA, with the FDA with respect to our SUCCEED Phase 3 trial of ridaforolimus for metastatic sarcoma, the FDA is not obligated to approve ridaforolimus as a result of the SPA, even though the clinical outcome of the SUCCEED trial is positive. Therefore, we cannot provide assurance that positive results in the SUCCEED trial will be sufficient for FDA approval of ridaforolimus.

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

Under our License Agreement with Merck, Merck is responsible for providing the active pharmaceutical ingredient used in ridaforolimus drug product, and for the formulation of the finished drug product. Under our agreements with Medinol and ICON, we are responsible for providing the ridaforolimus to be delivered by the stents or other medical devices being developed by Medinol and ICON. 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, Merck or any third-party manufacturer of 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 can result in regulatory action up to and including cessation of shipment of product.

Even if we or our partners 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 partners 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 the 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, who was appointed in calendar year 2009, 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 2010, our stock price ranged from a high of $5.44 to a low of $2.06. Some of the many factors that contribute to such volatility include:

- announcements regarding results and timing of preclinical studies and clinical trials for our product candidates, including the Phase 3 SUCCEED trial for ridaforolimus being conducted by Merck and our pivotal Phase 2 PACE trial for ponatinib;
- the results and timing of efforts by Merck and our medical device partners or any future partners to develop ridaforolimus or any other product candidates that we license;
- 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;
- evidence of the safety or efficacy of our product candidates;
- decisions by regulatory agencies that impact or may impact our product candidates;
- announcements regarding product developments or regulatory approvals obtained by companies developing competing products;
- our funding resources and requirements, including announcements of new equity or debt financings;
- 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, provisions in our charter and bylaws and our stockholders' rights plan, or poison pill, could make a third-party acquisition of us difficult.

Because we are a Delaware corporation, the anti-takeover provisions of Delaware law could make it more difficult for a third party to acquire control of us, even if the change in control would be beneficial to stockholders. We are subject to the provisions of Section 203 of the General Corporation Law of Delaware, which prohibits us from engaging in certain business combinations, unless the business combination is approved in a prescribed manner. In addition, our certificate of incorporation and our bylaws, each as currently in effect, also contain certain provisions that may make a third-party acquisition of us difficult, including:

- a classified board of directors, with three classes of directors each serving 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 our board of directors;
- the ability of the board of directors to issue preferred stock that could dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors;
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings; and
- the inability of our stockholders to call a special meeting.

These provisions, as well as Section 203, may discourage certain types of transactions in which our stockholders might otherwise receive a premium for their shares over the current market price, and may limit the ability of our stockholders to approve transactions that they think may be in their best interests.

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 2012, with two consecutive five-year renewal options. We believe that our currently leased facility will be adequate for our research and development and other business activities at least through the year 2012. We believe that any additional space we may require will be available on commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

None.

ITEM 4: (Removed and Reserved)

PART II

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

Market Information

Our common stock is traded on The NASDAQ Global Market 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.

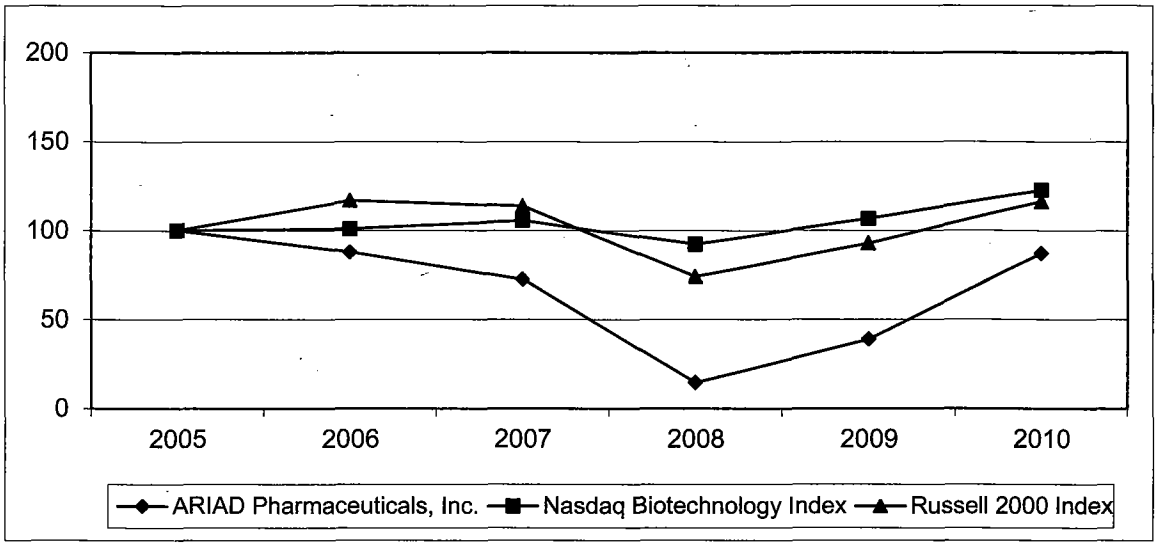
2010:	High	Low
First Quarter	$ 3.92	$ 2.06
Second Quarter	4.41	2.80
Third Quarter	3.85	2.57
Fourth Quarter	5.44	3.51
2009:		
First Quarter	$ 2.95	$ 0.83
Second Quarter	1.93	1.15
Third Quarter	3.48	1.46
Fourth Quarter	2.69	1.70

On March 11, 2011, the last reported sale price of our common stock was $5.71.

Stock Performance Graph

The following graph compares the yearly percentage change in the cumulative total stockholder return on our common stock since December 31, 2005, with the total cumulative return of the NASDAQ Biotechnology Index and the Russell 2000® Index, each of which ARIAD is a member. 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, 2005 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.



	2005	2006	2007	2008	2009	2010
ARIAD Pharmaceuticals, Inc.	100.00	87.86	72.65	14.53	38.97	87.18
NASDAQ Biotechnology Index	100.00	101.02	105.65	92.31	106.74	122.76
Russell 2000 Index	100.00	117.00	113.79	74.19	92.90	116.40

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 28, 2011, the approximate number of holders of record of our common stock was 440, 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, 2010, 2009, 2008, 2007 and 2006 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, 2010 and 2009 and for the years ended December 31, 2010, 2009 and 2008 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	2010	2009	2008	2007	2006
Consolidated Statements of Operations Data:					
License and collaboration revenue [1]	$ 174,460	$ 8,302	$ 7,082	$ 3,583	$ 896
Service revenue [1]	4,520	---	---	---	---
Total revenue	178,980	8,302	7,082	3,583	896
Operating expenses:					
Research and development	57,985	63,447	50,841	39,565	43,312
General and administrative	16,095	16,888	28,092	24,712	21,251
Total operating expenses	74,080	80,335	78,933	64,277	64,563
Income (loss) from operations	104,900	(72,033)	(71,851)	(60,694)	(63,667)
Other income (expense):					
Interest income (expense), net	(120)	(171)	799	2,172	1,739
Revaluation of warrant liability [2]	(19,532)	(7,804)	---	---	---
Other income (expense), net	(19,652)	(7,975)	799	2,172	1,739
Net income (loss)	$ 85,248	$ (80,008)	$ (71,052)	$ (58,522)	$ 61,928)
Net income (loss) per share – basic	$ 0.75	$ (0.86)	$ (1.02)	$ (0.86)	$ (0.99)
– diluted	$ 0.74	$ (0.86)	$ (1.02)	$ (0.86)	$ (0.99)
Weighted average number of shares of common stock outstanding – basic	113,020	93,330	69,791	68,216	62,680
– diluted	114,734	93,330	69,791	68,216	62,680

	As of December 31,				
In thousands	2010	2009	2008	2007	2006
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$ 103,630	$ 40,362	$ 38,369	$ 84,499	$ 39,476
Working capital	88,775	8,212	13,475	63,892	25,531
Total assets	120,030	65,010	68,188	101,105	51,043
Total deferred revenue [1]	---	111,611	97,264	85,845	454
Long-term debt and capital lease obligations	8,294	142	11,622	---	3,815
Accumulated deficit	(433,360)	(518,608)	(438,600)	(367,549)	(309,026)
Stockholders' equity (deficit)	64,076	(89,016)	(69,198)	(7,900)	30,262

[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.

[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. 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.

Product Development and Discovery

Our lead cancer product candidate, ridaforolimus, previously known as deforolimus, is being studied in multiple clinical trials in patients with various types of cancers. In July 2007, we entered into a global collaboration agreement, or the Collaboration Agreement, with Merck & Co., Inc., or Merck, under which we shared responsibility for the development, manufacturing and commercialization of ridaforolimus for use in cancer. In May 2010, we entered into an amended and restated agreement with Merck, referred to as the License Agreement, that replaces the Collaboration Agreement. Under the terms of the License Agreement, we granted Merck an exclusive license to ridaforolimus for use in cancer, and Merck assumed responsibility for all activities related to the development, manufacturing and commercialization of ridaforolimus, as discussed further below. We initiated patient enrollment in our initial Phase 3 clinical trial of ridaforolimus in patients with metastatic sarcoma in the third quarter of 2007. We enrolled a total of 711 patients in this trial and, in January 2011, announced top-line data showing that ridaforolimus met the primary endpoint of improved progression-free survival, or PFS, compared to placebo. This clinical trial remains active, and patients continue to be followed to gather additional data on secondary endpoints, including overall survival and safety. Merck currently plans to file for marketing approval of ridaforolimus in patients with metastatic sarcomas in 2011, subject to final collection and analysis of all available data from the trial. In addition, Merck is currently continuing development of ridaforolimus, as both a single agent and in combination with other agents, in Phase 1 and Phase 2 clinical trials in several other cancer indications.

Our second product candidate, ponatinib, previously known as AP24534, is an investigational pan BCR-ABL inhibitor that we believe has broad potential applications in various hematological cancers and solid tumors. In the third quarter of 2010, we initiated 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. This trial, named PACE (**P**onatinib Ph+ **A**LL and **C**ML **E**valuation), is designed to provide definitive clinical data for regulatory approval of ponatinib in this setting. The trial is expected to enroll 320 patients at approximately 60 centers in North America, Europe, Australia and Asia. The primary endpoints are major cytogenetic response rate for chronic phase patients and major hematologic response rate for accelerated or blast phase CML patients and Ph+ALL patients. Secondary endpoints include major molecular response rate, duration of response, progression-free survival and overall survival. Patient enrollment in this clinical trial is progressing as planned, and we expect to complete patient enrollment by year-end 2011.

Our third product candidate is AP26113, an investigational anaplastic lymphoma kinase, or ALK, inhibitor. We are conducting preclinical testing and other studies required for an investigational new drug application, or IND, and anticipate submitting an IND by mid-2011 and beginning a Phase 1 clinical trial shortly thereafter.

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

Under our Collaboration Agreement with Merck for the global development, manufacture and commercialization of ridaforolimus, we and Merck were conducting a broad-based development program in multiple potential cancer indications. The Collaboration Agreement as in effect until May 4, 2010 provided that each party would fund 50 percent of global development costs, except for certain specific costs to be funded 100 percent by Merck. The Collaboration Agreement and a related supply agreement established responsibilities for supply of the product for development and commercial purposes, promotion, distribution and sales of the product, governance of the collaboration, termination provisions and other matters.

In addition to cost-sharing provisions, the Collaboration Agreement as in effect until May 4, 2010 provided for an up-front payment by Merck of $75 million, which was paid to us in July 2007, and provided up to $452 million in milestone payments based on the successful development of ridaforolimus in multiple potential cancer indications, of which $53.5 million had been paid to us through March 31, 2010, and up to $200 million in milestone payments based on achievement of specified product sales thresholds. The Collaboration Agreement provided that each party would receive 50 percent of the profit from the sales of ridaforolimus in the United States, and Merck would pay us tiered double-digit royalties on sales of ridaforolimus outside the United States.

In May 2010, we entered into an Amended and Restated Collaboration and Exclusive License Agreement, or the License Agreement, with Merck that replaces the Collaboration Agreement and a related supply agreement. Under the terms of the License Agreement, we have 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 fund 100 percent of all ridaforolimus costs effective as of January 1, 2010. 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 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 to be 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. These potential milestone payments include up to $65 million associated with potential regulatory filings and approvals for the sarcoma indication, for which we announced positive Phase 3 results in January 2011 and for which Merck has indicated its intention to file for marketing approval in 2011, up to $249 million associated with potential regulatory filings and approvals for other cancer indications and up to $200 million based on achievement of certain sales thresholds.

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 substantially completed in the fourth quarter of 2010. Merck agreed to pay us for all costs we incur related to the transition.

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. As a consequence, our deferred revenue liability at December 31, 2009 related to the Collaboration Agreement of $111.5 million (including the current portion of that liability) has been eliminated and our

stockholders' deficit at December 31, 2009 of $89.0 million has become stockholders' equity of $64.1 million at December 31, 2010.

Liquidity and Sources and Uses of Funding

As of December 31, 2010, we had cash and cash equivalents of $103.6 million, working capital of $88.8 million, and total stockholders' equity of $64.1 million. We believe that our cash and cash equivalents will be sufficient to fund our operations to the fourth quarter of 2012. This estimate assumes receipt of a $25 million milestone payment from Merck in 2011 for the acceptance by the FDA of a new drug application for ridaforolimus in patients with metastatic sarcomas, as well as the exercise of our outstanding warrants, which expire in February 2012, for proceeds to us of $20.6 million, of which a total of $6.4 million was received in January and February 2011.

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 related to our research and development activities in 2011 and beyond. Potential sources of funding for such activities beyond our current cash and cash equivalents include potential milestone payments from Merck related to regulatory filings and marketing approvals for ridaforolimus (including up to $65 million in milestones related to the sarcoma indication) and, if ridaforolimus is approved, royalty payments on net sales of ridaforolimus from Merck. We are also pursuing partnering opportunities for the development and commercialization of ponatinib outside of the United States which, if successful, could result in up-front, milestone and/or potential future royalty payments to us. In addition, at December 31, 2010, we had outstanding warrants to purchase 9,563,610 shares of our common stock which expire in February 2012, if not previously exercised. These warrants have an exercise price of $2.15 per share and would result in $20.6 million of proceeds if fully exercised. In January and February 2011, a total of 2,962,500 warrants were exercised for proceeds to us of approximately $6.4 million. We may also seek to raise funding by issuing common stock or other securities in one or more private placements or public offerings, as market conditions permit, or through the issuance of debt. Please see additional information under the caption "Liquidity and Capital Resources" below.

Each of our potential sources of funding is subject to numerous risks and uncertainties, and there is no assurance that such funding will become available in 2011, or at all, as discussed further in the section entitled "Risk Factors" in Part I, Item 1A of this annual report.

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.

For the year ended December 31, 2010, we reported license and collaboration revenue of $174.5 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. 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 whether there is objective and reliable evidence of the fair value of the undelivered items. When deliverables are separable, consideration received is allocated to the separate units of accounting based on the fair value of

the undelivered element by application of the residual method 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 were being recognized over the performance period. As a consequence, of the $128.5 million in up-front and milestone payments received from Merck pursuant to the Collaboration Agreement, as of December 31, 2009, $17.0 million had been recognized as revenue and $111.5 million had been deferred on our balance sheet. 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 is known, the amounts received related to the license and transition services rendered to date would be recognized in the period in which they were received or the services were rendered.

Intangible Assets

At December 31, 2010, we reported $7.1 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 probabilities. 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 reserve 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, 2010, we reported accrued product development expenses of $8.2 million on our balance sheet.

Our estimates of services performed or progress achieved are based on all available information we have obtained through 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, 2010 to purchase 9,563,610 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, 2010, we reported a warrant liability of $28.8 million on our balance sheet. These warrants expire in February 2012.

In January and February 2011, a total of 2,962,500 warrants were exercised for proceeds to us of approximately $6.4 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.

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 reflected on our balance sheet and, therefore, our statement of operations. If, for example, the volatility of our common stock at December 31, 2010 were 10% higher or lower than used in the valuation of such warrants, our valuation of the warrants would have increased or decreased by up to $251,000 with such difference reflected in our statement of operations.

Results of Operations

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 includes 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 includes $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.

We expect that our revenue will decrease significantly in 2011 because we recognized in 2010 all of the previously deferred revenue related to our Collaboration Agreement with Merck and because we substantially completed as of December 31, 2010 the transition of responsibilities to Merck pursuant to 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. 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 work on 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 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, our clinical programs consisted of our lead product candidate ridaforolimus, for which we initiated clinical development in 2003, and ponatinib, for which we initiated clinical development in 2008. The direct external expenses for ridaforolimus reflect our share of such expenses, 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 ridaforolimus were $8.5 million in 2010, a decrease of $21.5 million, as compared to 2009. The decrease is 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 reflect our share of ridaforolimus costs from January 1, 2010 to May 4, 2010, as compared to a full twelve months in the year ended December 31, 2009. We will have no direct external expenses for ridaforolimus in 2011 as Merck is now responsible for 100 percent of such costs.

Direct external expenses for our second clinical program, ponatinib, were $13.2 million in 2010, an increase of $7.7 million as compared to 2009. The increase is due primarily 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. We expect that our direct external expenses for ponatinib will increase in 2011 as we enroll additional patients in our Phase 2 clinical trial and continue to treat patients in our ongoing Phase 1 clinical trial.

The direct external expenses of $1.0 million incurred in our preclinical program for the year ended December 31, 2010, relate to manufacturing and other IND-enabling studies for our third product candidate, AP26113, an increase of $987,000 from 2009. We expect that our direct external expenses for AP26113 will increase in 2011 as we complete IND-enabling studies and expect to initiate a Phase 1 clinical trial.

All other R&D expenses increased by $7.2 million in 2010 as compared to 2009. This increase is 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 now invoice Merck for our services and record such amounts as service revenue. The increase is 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. We expect that all other R&D expenses will increase in 2011 to support the expanding development of ponatinib and AP26113 as well as 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 clearance. 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. Due to these uncertainties, accurate and meaningful estimates of the ultimate cost to bring a product to market, the timing of completion of any of our drug development programs and the period in which material net cash inflows from any of our drug development programs will commence are unavailable.

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, primarily due to a reduction in corporate and commercial development initiatives and legal fees related to 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. We expect that general and administrative expenses will increase in 2011 to support our ongoing research and development activities.

We expect that our operating expenses in total will increase in 2011 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 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 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. Potential future increases or decreases in our stock price, or other changes in the factors that impact the valuation of the warrant liability, will result in charges or credits, recognized in our consolidated statement of operations in future periods. Such charges or credits will not have any impact on our cash balances, current liquidity or cash flows unless the conditions that require cash settlement are met. These conditions include a change in control and the price of our common stock at less than the $2.15 warrant exercise price. These warrants expire in February 2012.

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 is 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 is largely due to the impact of the License Agreement with Merck, offset in part by the revaluation of our warrant liability described above. Because the revenue we reported in 2010 resulting from the License Agreement with Merck will not recur in 2011, we do not expect to report net income in 2011, consistent with the stage and status of our research and development efforts. We expect that our results of operations for 2011 will depend on a number of factors, including the progress of our product development programs, the progress of our discovery research programs, the receipt of milestone payments, the exercise of warrants, the impact of commercial and business development activities, and changes in the valuation of our warrant liability, among other factors. The extent of operating losses will 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, 2009 and 2008

Revenue

We recognized license and collaboration revenue of $8.3 million for the year ended December 31, 2009, compared to $7.1 million for the year ended December 31, 2008. The increase in license and collaboration revenue was due primarily to an increase in the revenue recognized from the Merck collaboration, based on the non-refundable up-front and milestone payments, totaling $128.5 million, paid by Merck through December 31, 2009, including $22.5 million in milestone payments paid by Merck during the year ended December 31, 2009, in accordance with our revenue recognition policy.

Operating Expenses

Research and Development Expenses

Research and development expenses increased by $12.6 million, or 25 percent, to $63.4 million in 2009, compared to $50.8 million in 2008, as follows:

	Year ended December 31,		Increase /
In thousands	2009	2008	(decrease)
Direct external expenses:			
Clinical programs	$ 35,406	$ 24,168	$ 11,238
Preclinical programs	61	---	61
All other R&D expenses	27,980	26,673	1,307
	$ 63,447	$ 50,841	$ 12,606

In 2009, our clinical programs consisted of our lead product candidate ridaforolimus, for which we initiated clinical development in 2003, and ponatinib, for which we initiated clinical development in 2008. The direct external expenses for ridaforolimus reflect our share of such expenses, including our share of Merck's costs, pursuant to the cost-sharing arrangement of our collaboration with Merck.

Direct external expenses for ridaforolimus were $30.0 million in 2009, an increase of $9.4 million, as compared to 2008, primarily reflecting our share of increases in clinical trial costs ($6.4 million) and manufacturing costs ($2.2 million) and our share of costs for Merck's services ($1.6 million). Clinical trial costs and contract manufacturing costs increased due primarily to increasing enrollment in our Phase 3 clinical trial of ridaforolimus in patients with metastatic sarcomas and in Phase 2 clinical trials of ridaforolimus in patients with breast cancer, endometrial cancer, prostate cancer and non-small cell lung cancer. Merck's services provided to the collaboration increased as a result of Merck's increasing activities in support of clinical trials and other activities for which Merck is responsible.

Direct external expenses for our second clinical program, ponatinib, were $5.5 million in 2009, an increase of $1.8 million as compared to 2008. The increase is due primarily to an increase in clinical costs of $548,000 and toxicology costs of $1.3 million. Clinical costs increased due to increasing enrollment in our Phase 1 clinical trial in patients with hematologic malignancies. Toxicology costs increased due to the conduct of long-term toxicology studies necessary to support development of this product candidate.

The direct external expenses incurred in our preclinical program relate to costs for toxicology studies for our third product candidate, AP26113. We incurred no direct external expenses for preclinical programs in 2008. Prior to the designation of our third product candidate, all programs other than clinical programs were designated as discovery research and are included in "all other R&D expenses" in the above table.

All other R&D expenses increased by $1.3 million in 2009 as compared to the corresponding period in 2008. This increase is due to an increase in 2009 in personnel expenses of $3.6 million related to the hiring of additional R&D personnel, primarily in our clinical, regulatory and manufacturing areas to support the expanding development of our product candidates, and an increase in overhead and

general expenses of $1.1 million due to increased depreciation and amortization related to capital expenditures, offset in part by a decrease in lab supplies and services of $594,000 and legal and consulting costs of $833,000, due to a focus on cost reduction, and an increase in Merck's allocated share of our internal expenses under the terms of the collaboration agreement of $1.9 million.

General and Administrative Expenses

General and administrative expenses decreased by $11.2 million, or 40 percent, from $28.1 million in 2008 to $16.9 million in 2009. Professional fees decreased by $11.3 million to $7.6 million in 2009 as compared to $18.9 million in 2008, due primarily to reduced costs related to corporate and commercial development initiatives, including reduced costs related to the development of systems and processes to support growth, and to our patent infringement litigations against Eli Lilly and Company, or Lilly, and Amgen Inc., or Amgen.

Other Income/Expense

Interest Income

Interest income decreased by 91 percent to $116,000 in 2009 from $1.3 million in 2008, as a result of lower interest yields from our cash equivalents and marketable securities and a lower average balance of funds invested in 2009.

Interest Expense

Interest expense decreased by 48 percent to $287,000 in 2009 from $550,000 in 2008, due to lower average loan balances and lower interest rates in 2009.

Revaluation of Warrant Liability

The fair value of our warrant liability at December 31, 2009 was $7.8 million higher than its fair value at its inception in February 2009, resulting in a non-cash charge of $7.8 million for the year ended December 31, 2009. The increase in value of the warrant liability is primarily due to the impact of the increase in the market price of our common stock since inception of the warrant.

Operating Results

We reported a loss from operations of $72.0 million in 2009 compared to a loss from operations of $71.9 million in 2008, an increase in loss of $182,000, or less than 1 percent. The increase in loss from operations is largely due to the net impact of increases in R&D expenses and decreases in general and administrative expenses described above. We also reported a net loss of $80.0 million in 2009 compared to a net loss of $71.1 million in 2008, an increase in net loss of $8.9 million or 13 percent, and a net loss per share of $0.86 and $1.02, in 2009 and 2008, respectively. The increase in net loss is largely due to the revaluation of our warrant liability described above. The decrease in net loss per share is largely due to the increase in the weighted average number of shares of common stock outstanding as a result of sales of common stock completed in February 2009 and August 2009.

Selected Quarterly Financial Data

Summarized unaudited quarterly financial data are as follows:

In thousands, except per share amounts	2010 First	2010 Second	2010 Third	2010 Fourth
Total revenue [1]	$ 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)

In thousands, except per share amounts	2009 First	2009 Second	2009 Third	2009 Fourth
Total revenue	$ 1,900	$ 2,094	$ 2,155	$ 2,153
Net loss	(20,234)	(20,954)	(20,809)	(18,011)
Net loss per share – basic and diluted	(0.26)	(0.24)	(0.21)	(0.17)

[1] 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 to institutional investors, collaborations with pharmaceutical 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 issuance of long-term debt. 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, 2010, 2009 and 2008, our sources of funds were as follows:

In thousands	2010	2009	2008
Sales/issuances of common stock:			
In common stock offerings	$ 57,515	$ 58,370	$ ---
Upon exercise of warrants	2,624	---	---
Pursuant to stock option and employee stock purchase plans	789	568	385
Proceeds from long-term borrowings	---	---	10,505
Up-front payment from Merck, included in cash provided by operating activities	50,000	---	---
	$ 110,928	$ 58,938	$ 10,890

Our up-front payment of $50 million from Merck in 2010 was received pursuant to the License Agreement entered into in May 2010. This up-front payment is included in cash provided by operating activities in our consolidated statement of cash flows for the year ended December 31, 2010 but is presented separately in this analysis due to the non-recurring nature of this payment.

The amount of funding we raise through sales of our common stock depends on many factors, including, but not limited to, the status and progress of our product development programs, 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. At the election of the warrant holder, upon certain transactions, including a merger, tender offer or sale of all or substantially all of our assets, 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 will expire on February 25, 2012 if not exercised by that date. On April 30, 2010, 1,220,414 warrants were exercised for proceeds of $2.6 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.

We have filed shelf registration statements with the 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. On January 11, 2010, we filed a shelf registration statement with the 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 issuance, we have approximately $65.8 million of securities remaining available under this shelf registration statement.

In January 2011, we amended our existing term loan with a bank. The amendment increases 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% of the principal amount in the first quarter, commencing on March 31, 2011, to 8.75% 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, 2010, 2009 and 2008 were as follows:

In thousands	2010	2009	2008
Net cash used in (provided by) operating activities	$ (6,418)	$ 51,904	$ 48,251
Less up-front payment from Merck	50,000	---	---
Adjusted net cash used in operating activities	43,582	51,904	48,251
Repayment of long-term borrowings	1,925	1,400	1,370
Investment in intangible assets	691	1,308	1,091
Investment in property and equipment	1,344	2,198	6,651
	$ 47,542	$ 56,810	$ 57,363

The net cash provided by or used in operating activities is comprised of our net income or losses, adjusted for non-cash expenses, changes in deferred revenue, including deferrals of the up-front and milestone payments received from Merck, and working capital requirements. As noted above, we recorded net income for the year ended December 31, 2010 of $85.2 million. Included in net income for the year ended December 31, 2010 was $111.5 million of license and collaboration revenue representing the recognition of previously deferred revenue under our Collaboration Agreement with Merck, which had no impact on cash flow during this period. After taking into account such non-cash revenue as well as non-cash expenses, and after deducting the $50 million up-front payment from Merck pursuant to the License Agreement, our adjusted net cash used in operating activities decreased by $8.3 million in 2010 as compared to 2009. This decrease reflected the impact of actions we took during 2010 to conserve cash and capital as we balanced our spending with our available resources, as well as the reduction in expenses related to ridaforolimus which were fully assumed by Merck pursuant to the License Agreement as of May 4, 2010. As noted above, we expect that we will incur a net loss in 2011 due to ongoing development of our product candidates; that our investment in intangible assets, consisting of our intellectual property, will increase in 2011 in support of our product development activities; and that our investment in property and equipment will increase in 2011 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, 2010, 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, 2010:

		Payments Due By Period			
In thousands	Total	In 2011	2012 through 2014	2015 through 2016	After 2016
Long-term debt	$ 9,625	$ 1,400	$ 7,700	$ 525	$ ---
Leases	3,350	2,097	1,253	---	---
Employment agreements	7,515	5,522	1,993	---	---
Other long-term obligations	4,912	730	4,182	---	---
	$ 25,402	$ 9,749	$ 15,128	$ 525	$ ---

Long-term debt consists of scheduled principal payments on such debt under the terms of the amendment to our term loan agreement entered into in January 2011, which amendment also increased the loan balance by $4.4 million to $14 million. Interest on our long-term debt is based on variable interest rates. Assuming a constant interest rate of 1.54 percent, the interest rate on our debt at December 31, 2010, over the remaining term of the debt, our interest expense would total approximately $128,000 in 2011.

Leases consist of payments to be made on our lease for our office and laboratory facility, the term of which extends to July 2012 (subject to two five-year renewals, at our option), 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 terms ranging from one to four years. Other long-term obligations are comprised primarily of our obligations under our deferred executive compensation plans.

Liquidity

At December 31, 2010, we had cash and cash equivalents totaling $103.6 million and working capital of $88.8 million, compared to cash and cash equivalents totaling $40.4 million and working capital of $8.2 million at December 31, 2009. For the year ended December 31, 2010, we reported net income of $85.2 million and cash provided by operating activities of $6.4 million which reflects the favorable impact of the $50.0 million up-front payment received from Merck related to the License Agreement entered into in May 2010. We believe that our cash and cash equivalents will be sufficient to fund our operations to the fourth quarter of 2012. This estimate assumes receipt of a $25 million milestone payment from Merck in 2011 for the acceptance by the FDA of a new drug application for ridaforolimus in patients with metastatic sarcomas as well as the exercise of our outstanding warrants, which expire in February 2012, for proceeds of $20.6 million of which a total of $6.4 million has been received in January and February of 2011.

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 related to our research and development activities in 2011 and beyond. There are numerous factors that are likely to affect the level of spending on our research and development programs including the number, size and complexity of, and rate of enrollment of patients in, our clinical trials for ponatinib and any clinical trials we may begin for 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 timing and amount of any future milestone and royalty payments related to ridaforolimus from Merck, the potential proceeds from the exercise of outstanding warrants to purchase our common stock, and the impact of our business development activities.

As noted previously, our License Agreement with Merck provides potential funding in the form of up to $514 million in regulatory and sales milestone payments, including potential near-term milestone payments related to the Phase 3 SUCCEED clinical trial of ridaforolimus in patients with bone and soft-tissue sarcomas. In January 2011, we announced top-line data from this clinical trial showing that ridaforolimus met the primary endpoint of improved progression-free survival compared to placebo. Merck currently plans to file for marketing approval of ridaforolimus in the United States and Europe in 2011, subject to final collection and analysis of all available data from the trial. We will be eligible to receive up to $65 million in milestone payments from Merck related to the sarcoma indication (consisting of $25 million for acceptance of a new drug application by the FDA which we expect to receive in 2011, $25 million for marketing approval in the United States, $10 million for marketing approval in Europe, and $5 million for marketing approval in Japan). In addition to milestone payments, if ridaforolimus receives regulatory approval, Merck will pay us tiered double-digit royalties on global net sales of ridaforolimus.

In addition to potential funding from Merck, we are also pursuing partnering opportunities with our second product candidate, ponatinib and other licensing opportunities with our technologies. Such transactions could generate up-front and milestone payments as well as funding of on-going development costs. Regarding ponatinib, we are focusing our partnering strategy on a regional collaboration in select markets outside of the United States. We believe that such an approach will allow us to retain substantial potential commercial value of ponatinib for use in cancers. There is no guarantee, however, that we will be successful in entering into any such partnership arrangements on commercially reasonable terms, if at all, or that we will receive any revenue through these partnership efforts in the future. If we raise additional funds through collaborations, strategic alliances 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.

We may also seek to raise funds by issuing common stock or other securities in one or more private placements or public offerings, as market conditions permit, or through the issuance of debt. 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. At December 31, 2010, we had warrants outstanding to purchase 9,563,610 shares of our common stock from our registered direct offering of common stock in February 2009. These warrants have an exercise price of $2.15 per share and expire in February 2012. In January and February 2011, a total of 2,962,500 warrants were exercised by the holders for proceeds to us of approximately $6.4 million. Subsequent to the exercises in January and February 2011, a total of 6,601,110 warrants remain outstanding which, if exercised, would provide $14.2 million in net proceeds to the Company. 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 and is not expected to have a material impact on our financial statements.

In September 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. Implementation of this guidance is required no later than fiscal years beginning after June 15, 2010 and this guidance may be applied prospectively to new or materially modified arrangements after the effective date or retrospectively. Early application is permitted. This guidance may impact our determination of the separation of deliverables for future arrangements.

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.

We invest cash balances in excess of operating requirements 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. These securities are classified as available-for-sale.

Our investments are sensitive to interest rate risk. However, because our available funds at December 31, 2010, were invested solely in cash equivalents, our risk of loss due to changes in interest rates is not material.

At December 31, 2010, we have recorded as a liability the fair value of warrants to purchase 9,563,610 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 determined using the Black-Scholes option valuation model and is therefore 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 ($0.51 based on the market price of our stock at December 31, 2010) of our common stock on which the December 31, 2010 valuation was based, the value would have increased by $4.7 million. Such increase would have been reflected as additional loss on revaluation of the warrant liability in our statement of operations.

At December 31, 2010, we had $9.6 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 (15.0 basis points at December 31, 2010), we would incur approximately $14,000 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, 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, 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, 2010 and 2009, 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, 2010. 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, 2010 and 2009, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with accounting principles generally accepted in the United States of America.

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, 2010, 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 March 15, 2011 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
March 15, 2011

ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

In thousands, except share and per share data	December 31, 2010	December 31, 2009
ASSETS		
Current assets:		
Cash and cash equivalents	$ 103,630	$ 40,362
Amounts due under license or collaboration agreements (Note 2)	407	3,583
Other current assets	1,135	1,951
Total current assets	105,172	45,896
Restricted cash	749	749
Property and equipment, net (Note 3)	7,037	8,738
Intangible and other assets, net (Note 4)	7,072	9,627
Total assets	$ 120,030	$ 65,010
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 3,122	$ 4,806
Current portion of long-term debt and capital lease obligations (Note 5)	1,466	11,669
Accrued compensation and benefits	1,127	1,050
Accrued product development expenses	8,189	8,072
Other accrued expenses	1,664	2,708
Current portion of deferred executive compensation (Note 6)	693	655
Current portion of deferred revenue (Note 2)	---	8,592
Other current liabilities	136	132
Total current liabilities	16,397	37,684
Long-term debt and capital lease obligations (Note 5)	8,294	142
Other long-term liabilities	330	454
Deferred revenue (Note 2)	---	103,019
Deferred executive compensation (Note 6)	2,118	1,364
Warrant liability	28,815	11,363
Commitments and contingent liabilities (Note 7)		
Stockholders' equity (deficit) (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 2010, 145,000,000 shares in 2009; shares issued and outstanding 126,942,431 shares in 2010, 109,042,782 shares in 2009	127	109
Additional paid-in capital	497,309	429,483
Accumulated deficit	(433,360)	(518,608)
Total stockholders' equity (deficit)	64,076	(89,016)
Total liabilities and stockholders' equity (deficit)	$ 120,030	$ 65,010

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, 2010	2009	2008
License and collaboration revenue (Note 2)	$ 174,460	$ 8,302	$ 7,082
Service revenue	4,520	---	---
Total revenue	178,980	8,302	7,082
Operating expenses:			
Research and development	57,985	63,447	50,841
General and administrative	16,095	16,888	28,092
Total operating expenses	74,080	80,335	78,933
Income (loss) from operations	104,900	(72,033)	(71,851)
Other income (expense):			
Interest income	86	116	1,349
Interest expense	(206)	(287)	(550)
Revaluation of warrant liability	(19,532)	(7,804)	---
Other income (expense), net	(19,652)	(7,975)	799
Net income (loss)	$ 85,248	$ (80,008)	$ (71,052)
Net income (loss) per share - basic	$ 0.75	$ (0.86)	$ (1.02)
- diluted	$ 0.74	$ (0.86)	$ (1.02)
Weighted average number of shares of common stock outstanding - basic	113,020	93,330	69,791
- diluted	114,734	93,330	69,791

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, 2008	69,241,490	$ 69	$ 359,576	$ 3	$ (367,548)	$ (7,900)
Issuance of shares pursuant to ARIAD stock plans	324,573		385			385
Issuance of shares to minority shareholders of AGTI	1,799,276	2	4,601			4,603
Stock-based compensation			4,751			4,751
Comprehensive loss:						
Net loss					(71,052)	(71,052)
Net unrealized gains on marketable securities				15		15
Total comprehensive loss						(71,037)
Balance, December 31, 2008	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 gains 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 pursuant to 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

See notes to consolidated financial statements.

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

In thousands	Years Ended December 31, 2010	2009	2008
Cash flows from operating activities:			
Net income (loss)	$ 85,248	$ (80,008)	$ (71,052)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation, amortization and impairments	6,147	4,219	3,016
Accretion of discount on marketable securities	---	(20)	(381)
Stock-based compensation	4,836	4,355	4,751
Deferred executive compensation expense	1,477	1,134	402
Revaluation of warrant liability	19,532	7,804	---
Increase (decrease) from:			
Inventory and other current assets	816	2,104	(1,681)
Amounts due under license and collaboration agreements	3,176	1,997	(992)
Other assets	(2)	(12)	7
Accounts payable	(1,684)	(4,564)	4,321
Accrued compensation and benefits	76	233	294
Accrued product development expenses	117	(1,864)	2,649
Other accrued expenses	(1,043)	(1,282)	(341)
Other liabilities	18	662	---
Deferred revenue	(111,611)	14,347	11,419
Deferred executive compensation paid	(685)	(1,009)	(663)
Net cash provided by (used in) operating activities	6,418	(51,904)	(48,251)
Cash flows from investing activities:			
Acquisitions of marketable securities	---	(7,599)	(57,264)
Proceeds from maturities of marketable securities	---	22,426	60,169
Change in restricted cash	---	(50)	---
Investment in property and equipment	(1,344)	(2,198)	(6,651)
Investment in intangible assets	(691)	(1,308)	(1,091)
Net cash provided by (used in) investing activities	(2,035)	11,271	(4,837)
Cash flows from financing activities:			
Proceeds from long-term borrowings	---	---	10,505
Repayment of long-term borrowings	(1,925)	(1,400)	(1,370)
Proceeds from issuance of common stock, net of issuance costs	57,515	58,370	---
Proceeds from issuance of common stock pursuant to warrants	2,624	---	---
Principal payments under capital lease obligation	(118)	(87)	(53)
Proceeds from issuance of common stock pursuant to stock option and purchase plans	789	568	385
Net cash provided by financing activities	58,885	57,451	9,467
Net increase (decrease) in cash and cash equivalents	63,268	16,818	(43,621)
Cash and cash equivalents, beginning of year	40,362	23,544	67,165
Cash and cash equivalents, end of year	$ 103,630	$ 40,362	$ 23,544
Interest paid	$ 182	$ 302	$ 511
Supplemental disclosure on non-cash activities:			
Property and equipment acquired through capital lease	$ 19	$ 206	$ 195

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's lead cancer product candidate, ridaforolimus, previously known as deforolimus, is being studied in multiple clinical trials in patients with various types of cancers. The Company entered into a global collaboration in July 2007 with Merck & Co., Inc. (together with its subsidiaries, "Merck") to jointly develop and commercialize ridaforolimus for use in cancer, which agreement was amended and restated in May 2010. As further discussed in Note 2, under the terms of the amended and restated agreement, Merck has assumed responsibility for all activities related to the development, manufacture, and commercialization of ridaforolimus. The Company will receive milestone payments upon achievement of certain events and royalties as discussed in Note 2. The Company's second product candidate, ponatinib, previously known as AP24534, 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. The Company's third product candidate, AP26113, is in the preclinical stage of development. 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.

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.

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 and whether there is objective and reliable evidence of the fair value of the undelivered items. When deliverables are separable, consideration received is allocated to the separate units of accounting based on the fair value of the undelivered element by application of the residual method 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 expected realized amounts.

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.

Recently 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 and is not expected to have a material impact on the Company's financial statements.

In September 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. Implementation of this guidance is required no later than fiscal years beginning after June 15, 2010 and this guidance may be applied prospectively to new or materially modified arrangements after the effective date or retrospectively. Early application is permitted. This guidance may impact the Company's determination of the separation of deliverables for future arrangements.

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, except that Merck funded 100 percent of any cost of development specific to development or commercialization of ridaforolimus outside the United States. Under the Collaboration Agreement, the Company was responsible for supplying the active pharmaceutical ingredient used in the product and Merck was responsible for the formulation of the finished product, all under a separate supply agreement between the parties entered into in May 2008.

The Collaboration Agreement provided that, in the United States, the Company and Merck would co-promote the product, the Company would distribute and sell the product for all cancer indications and record all sales, and each party would receive 50 percent of the profit from such sales. Outside the United States, Merck would distribute, sell and promote the product and record all sales, and Merck would pay the Company tiered double-digit royalties on such sales. Royalties would be payable by Merck, on a country by country basis, until the later of (i) the expiration of the last valid claim of any patent rights owned by either the Company or Merck that cover the product, (ii) a specified number of years from first commercial sale, or (iii) the last date upon which the Company supplies the active pharmaceutical ingredient to Merck under the supply agreement, subject to partial reduction in certain circumstances.

Under the terms of the Collaboration Agreement, Merck paid the Company an initial up-front payment of $75 million in July 2007, and agreed to pay up to $652 million in milestone payments, of which $53.5 million had been paid up to May 4, 2010, based on the successful development of ridaforolimus in multiple potential cancer indications, and achievement of specified product sales thresholds. Merck had also agreed to provide the Company with up to $200 million in interest-bearing, repayable, development cost advances to cover a portion of the Company's share of global costs, after the Company had paid $150 million in global development costs and had obtained regulatory approval to market ridaforolimus from the Food and Drug Administration ("FDA") in the United States or similar regulatory authorities in Europe or Japan.

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. Any amounts due to or from Merck in respect of such development

costs and milestone payments earned but not received were recorded as such on the Company's balance sheet.

The License Agreement (May 2010 to present)

Under the terms of the License Agreement, the Company 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 fund 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, would be compensated by Merck for its sales efforts.

Under the License Agreement, Merck paid the Company an initial up-front fee of $50 million in May 2010 and 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. These potential milestone payments include up to $65 million associated with potential regulatory filings and approvals for the sarcoma indication, (consisting of $25 million for acceptance of filing of a new drug application by the FDA, $25 million for marketing approval in the United States, $10 million for marketing approval in Europe, and $5 million for marketing approval 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. These milestone payments replace the remaining unpaid milestone payments provided for in the Collaboration Agreement.

The License Agreement provides that all ridaforolimus activities that had been the responsibility of the Company under the Collaboration Agreement would be transitioned to Merck, a process that was substantially completed in the fourth quarter of 2010. Merck may request the Company to provide additional services, which the Company can provide at its election. 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.

Pursuant to this License Agreement, in addition to the $50 million up-front payment from Merck, the Company has also received from Merck 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.

The Company considers this License Agreement to be a new agreement for accounting purposes, as the economic terms and deliverables have been 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 is objective and reliable evidence of the fair value of the undelivered transition services. In accounting for separate units of accounting for multiple element arrangements, when the fair value of the undelivered element is known, the revenue recognized for the undelivered element is based on the fair value of this unit of accounting. Accordingly, the Company will recognize the fair value of the transition services as they are provided. 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:

- $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.

Under the License Agreement, Merck pays the Company for its transition services from May 4, 2010 until completion of the transition. The Company recognizes these payments as service revenue as the services are delivered. For the year ended December 31, 2010, the Company has recorded approximately $4.5 million of service revenue related to its transition services. The cost of such services is reflected in operating expenses in the period in which they are 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. 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	2010	2009
Leasehold improvements	$ 22,090	$ 22,027
Equipment and furniture	15,675	15,542
	37,765	37,569
Less accumulated depreciation and amortization	(30,728)	(28,831)
	$ 7,037	$ 8,738

Depreciation and amortization expense for the years ended December 31, 2010, 2009 and 2008 was $3.0 million, $3.2 million and $2.3 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	2010	2009
Equipment and furniture	$ 420	$ 401
Less accumulated depreciation and amortization	(172)	(87)
	$ 248	$ 314

4. Intangible and Other Assets, Net

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

In thousands	2010	2009
Capitalized patent and license costs	$ 6,465	$ 11,817
Purchased technology	5,901	5,901
	12,366	17,718
Less accumulated amortization	(5,332)	(8,127)
	7,034	9,591
Other assets	38	36
	$ 7,072	$ 9,627

Amortization expense for intangible assets amounted to $880,000, $1,031,000 and $749,000 in 2010, 2009 and 2008, respectively. The weighted average amortization period for intangible assets was 14.8 years, 15.2 years and 14.8 years in 2010, 2009 and 2008, respectively. The estimated future amortization expenses for capitalized patent and license costs and purchased technology are $601,000 for 2011, $592,000 for 2012, $592,000 for 2013, $592,000 for 2014 and $585,000 for 2015.

For the years ended December 31, 2010, 2009 and 2008, the Company recorded charges in research and development expense of $2.4 million, $47,000 and $1,000, 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 a current 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	2010	2009
Bank term loan	$ 9,625	$ 11,550
Capital lease obligations	135	261
	9,760	11,811
Less current portion	(1,466)	(11,669)
	$ 8,294	$ 142

The term loan as of December 31, 2010 provides for quarterly payments of principal and interest with final maturity in 2013. 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 1.54% at December 31, 2010. 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, as amended, 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, a covenant in the loan agreement requires that the Company not receive an audit report on its annual audited financial statements that includes a "going concern" explanatory paragraph within the audit report. The Company obtained a waiver from the bank related to this requirement for the year ended December 31, 2009. At December 31, 2009, the entire term loan balance was classified as a current liability because the Company was unable to conclude that future covenant violations would not occur within the following twelve months. As a result of the additional funding provided under the May 2010

Merck License Agreement and the net proceeds of approximately $57.5 million received from the underwritten public offering of our common stock on October 29, 2010, the debt is now classified based on its scheduled maturity.

In January 2011, the Company amended the existing term loan with the bank. The amendment increases 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% of the principal amount in the first quarter, commencing on March 31, 2011, to 8.75% of the principal amount in the final quarter, together with interest, throughout the term of the loan. All other provisions of the Company's existing loan remain in full force and effect. Given the Company's intent and ability to refinance the scheduled maturity of the loan payments, the current portion of the long-term debt at December 31, 2010 reflects the scheduled principal payments in 2011, giving effect to the January 2011 amendment.

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% to 7.2% and are secured by the underlying leased asset.

The future principal payments of the outstanding obligations as of December 31, 2010, after giving effect to the January 2011 amendment, were as follows:

In thousands	Bank Term Loan	Capital Lease Obligations
Year ended December 31:		
2011	$ 1,400	$ 66
2012	1,400	54
2013	2,100	15
2014	4,200	---
2015	525	---
	9,625	135
Less current portion	(1,400)	(66)
Long-term portion	$ 8,225	$ 69

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 value of awards made in 2010, 2009 and 2008 were $1.8 million, $1.1 million and $812,000, respectively. The net expense for this plan was $1.5 million, $1.1 million and $402,000 in 2010, 2009 and 2008, respectively. The estimated future expenses for awards made through December 31, 2010, assuming no change in the value of the underlying mutual funds, are $1.2 million and $946,000 for 2011 and 2012, 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 2006 and provides that the current lease term extends to July 2012 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 $28,000 in 2010, amounted to $2.1 million, $2.1 million and $2.1 million in 2010, 2009 and 2008, respectively. Future minimum annual rental payments through July 2012 are $2.0 million

in 2011 and $1.2 million in 2012, which are net of expected sub-lease income of $67,000 in 2011 and $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 2010, 2009 and 2008, and are expected to amount to approximately $145,000 annually in 2011 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 twenty officers of the Company. The agreements provide for aggregate annual base salaries of $5.9 million for 2010, $5.5 million for 2011, $1.4 million for 2012, and $632,000 for 2013, and remaining terms of employment of up to four years.

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, 2010, 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 will expire on February 25, 2012. On April 30, 2010, 1,220,414 warrants were exercised for proceeds to the Company of $2.6 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 warrants and the proceeds received was credited to additional paid-in-capital and totaled $4.7 million. At December 31, 2010, there were 9,563,610 warrants outstanding. In January and February 2011, a total of 2,962,500 warrants were exercised by the holders for proceeds to the Company of approximately $6.4 million.

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 the fair value is adjusted at each financial reporting date with the adjustment reflected in the consolidated statement of operations. The Company has classified the warrant obligation as a long-term liability as there is no indication that a merger, tender offer or similar transaction is 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 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 its shelf registration statement.

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, 2010 and 2009 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, 2010			
In thousands	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash equivalents	$ 17,041	$ ---	$ 17,041	$ ---
Liabilities:				
Warrant liability	$ 28,815	$ ---	$ ---	$ 28,815

	December 31, 2009			
In thousands	Total	Level 1	Level 2	Level 3
Assets:				
Cash equivalents	$ 17,955	$ ---	$ 17,955	$ ---
Liabilities:				
Warrant liability	$ 11,363	$ ---	$ ---	$ 11,363

The Company's warrant liability is carried at fair value and is classified as Level 3 in the fair value hierarchy due to the use of significant unobservable inputs. The fair value of the warrants on the date of their issuance was determined to be $3.6 million using the Black-Scholes option valuation model applying the following inputs: (i) the market price of the Company's common stock of $1.69 on that date, (ii) a risk-free rate of 1.5%, (iii) an expected term of 3 years, (iv) no dividend yield, and (v) a volatility of 66%. As of December 31, 2010, the fair value of the warrants was determined to be $28.8 million using Black-Scholes option valuation model applying the financing assumptions: (i) the market price of the Company's common stock of $5.10 on that date, (ii) a risk-free rate of 0.34%, (iii) an expected term of 1.2 years, (iv) no dividend yield and (v) a volatility of 54%. As of December 31, 2009, the fair value of the warrants was determined to be $11.4 million using the Black-Scholes option valuation model applying the following assumptions: (i) the market price of the Company's common stock of $2.28 on that date, (ii) a risk-free rate of 1.23%, (iii) an expected term of 2.2 years, (iv) no dividend yield and (v) a volatility of 79%. 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, 2010 and 2009 were as follows:

In thousands	2010	2009
Balance, beginning of year	$ 11,363	$ ---
Issuance of warrants	---	3,559
Revaluation of warrants	19,532	7,804
Exercise of warrants	(2,080)	---
Balance, end of year	$ 28,815	$ 11,363

The carrying amounts of cash, 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 note approximates fair value due to its variable interest rate. The Company's obligation under its executive compensation plans is based in part on the current fair market value of underlying securities, 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, 2010, there are 5,409,680 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 2010, 2009 and 2008, 176,318, 401,797 and 92,698 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	2010	2009	2008
Compensation cost from:			
Stock options	$ 1,879	$ 3,068	$ 3,798
Stock and stock units	2,834	1,096	900
Purchases of common stock at a discount	123	191	53
	$ 4,836	$ 4,355	$ 4,751
Compensation cost included in:			
Research and development expenses	$ 2,444	$ 2,123	$ 2,441
General and administrative expenses	2,392	2,232	2,310
	$ 4,836	$ 4,355	$ 4,751

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, 2010, 2009 and 2008:

In thousands, except per share amounts	2010	2009	2008
Weighted average fair value of options granted, per share	$ 2.43	$ 1.03	$ 1.83
Total cash received from exercises of stock options	418	206	154
Total intrinsic value of stock options exercised	331	271	90

The weighted average fair value of options granted in the years ended December 31, 2010, 2009 and 2008, reflect the following weighted-average assumptions:

	2010	2009	2008
Expected life of options granted (*in years*)	6.75	7.04	7.04
Expected volatility	78.54%	70.68%	69.37%
Risk-free rate	2.57%	2.75%	3.04%
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, 2010, 2009 and 2008 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, 2010 was as follows:

	Number of Shares	Weighted Average Exercise Price Per Share
Options outstanding, January 1, 2010	7,684,171	$ 4.58
Granted	371,400	$ 3.39
Forfeited	(684,797)	$ 6.29
Exercised	(193,583)	$ 2.16
Options outstanding, December 31, 2010	7,177,191	$ 4.42

The following table summarizes information about stock options outstanding as of December 31, 2010:

	Options Outstanding	Options Exercisable	Options Expected To Vest
Number of options	7,177,191	5,361,728	1,508,263
Weighted average exercise price per share	$ 4.42	$ 5.01	$ 2.72
Aggregate intrinsic value *(in 000's)*	$ 8,104	$ 3,715	$ 3,594
Weighted average remaining contractual term *(in years)*	5.16	4.22	7.91

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

At December 31, 2010, total unrecognized compensation cost related to non-vested stock options outstanding amounted to $1.7 million. That cost is expected to be recognized over a weighted-average period of 2.1 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, 2010 was as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding, January 1, 2010	1,489,000	$ 2.05
Granted	2,129,700	$ 3.24
Forfeited	(295,066)	$ 2.70
Vested or restrictions lapsed	(544,334)	$ 2.34
Outstanding, December 31, 2010	2,779,300	$ 2.83

At December 31, 2010, total unrecognized compensation cost related to stock and stock unit awards amounted to $4.0 million. That cost is expected to be recognized over a weighted average of 2.1 years.

The total fair value of stock and stock unit awards that vested in 2010, 2009 and 2008 was $1.6 million, $279,000 and $275,000, 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 would be 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, 2010, 2009 and 2008 are as follows:

In thousands	2010	2009	2008
Net income (loss)	$ 85,248	$ (80,008)	$ (71,052)
Weighted average shares outstanding – basic	113,020	93,330	69,791
Dilutive stock options	572	---	---
Restricted stock and restricted stock units	1,142	---	---
Weighted average shares outstanding – diluted	114,734	93,330	69,791

For the years ended December 31, 2010, 2009 and 2008, 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	2010	2009	2008
Stock options	5,852	7,684	7,424
Restricted stock and restricted stock units	---	1,489	554
Warrants	9,564	10,784	---
	15,416	19,957	7,978

13. Income Taxes

The Company's effective tax rate differs from the statutory rate principally due to the full valuation allowance on its deferred tax assets, after consideration of permanent differences including the Company's expense related to the revaluation of its warranty liability. The components of deferred income taxes were as follows at December 31:

In thousands	2010	2009
Deferred tax liabilities:		
Intangible and other assets	$ 2,813	$ 3,836
Deferred tax assets:		
Net operating loss carryforwards	134,065	142,604
Federal and state tax credit carryovers	24,489	25,274
Depreciation	4,837	4,739
Deferred revenue	---	36,113
Stock-based compensation	3,122	2,518
Other	1,289	1,058
Total deferred tax assets	167,802	212,306
Deferred tax assets, net	164,989	208,470
Valuation allowance	(164,989)	(208,470)
Total deferred taxes	$ ---	$ ---

At December 31, 2010, 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	$ 378,612	2012 through 2029
State	$ 90,685	2012 through 2014
Research and development credit carryforwards:		
Federal	$ 16,685	2011 through 2030
State	$ 7,459	2011 through 2025

Since the Company has not yet achieved sustained profitable operations, management believes the tax benefits do not satisfy the more-likely-than-not realization criteria and has recorded a valuation allowance for the entire net deferred tax asset. The valuation allowance increased by $21.9 million and $21.8 million in 2009 and 2008, 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 the utilization of net operating loss carryforwards. The Company does not have any material uncertain tax positions.

The Company is subject to U.S. federal and Massachusetts corporate income taxes. 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 1996 for U.S. federal tax purposes and 2006 for Massachusetts state tax purposes.

14. Related Party Transactions

In June 2007, the Company entered into an agreement with its chief executive officer and with a member of its Board of Directors in their individual capacities as shareholders of the Company's former majority-owned subsidiary, ARIAD Gene Therapeutics, Inc. ("AGTI"). The agreement contained provisions regarding (i) confidentiality of material non-public information provided to them and their advisors in the course of evaluation of any potential transaction to acquire the 20 percent interest in AGTI that the Company did not own, (ii) reimbursement by the Company of certain reasonable expenses incurred by them to retain financial advisors and legal counsel to advise them in connection with any potential transaction, (iii) indemnification of them by the Company for claims arising out of or relating to any potential transaction and (iv) the maintenance by the Company of liability insurance for their benefit. For the year ended December 31, 2008, the Company reimbursed $259,000 in expenses pursuant to this agreement. AGTI was merged with and into ARIAD Pharmaceuticals, Inc. on September 12, 2008 and the 20 percent minority interest in AGTI was acquired by the Company consequent to the merger.

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.

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their desired control objectives. Our principle executive officer and principle financial officer have concluded that our controls and procedures are effective at that reasonable assurance level.

(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, 2010. 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, 2010, 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, 2010, 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, 2010, 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, 2010, 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, 2010 of the Company and our report dated March 15, 2011 expressed an unqualified opinion on those financial statements.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
March 15, 2011

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 2011 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 2011 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 2011 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 2011 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 2: Ratification of Selection of Independent Registered Public Accounting Firm" in the Company's Definitive Proxy Statement for the 2011 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 15th day of March, 2011.

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. Harvey J. Berger, M.D.	Chairman of the Board of Directors, Chief Executive Officer and President (Principal Executive Officer)	March 15, 2011
/s/ Edward M. Fitzgerald Edward M. Fitzgerald	Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	March 15, 2011
/s/ Jay R. LaMarche Jay R. LaMarche	Director	March 15, 2011
/s/ Athanase Lavidas, Ph.D. Athanase Lavidas, Ph.D.	Director	March 15, 2011
/s/ Massimo Radaelli, Ph.D. Massimo Radaelli, Ph.D.	Director	March 15, 2011
/s/ A. Collier Smyth, M.D. A. Collier Smyth, M.D.	Director	March 15, 2011
/s/ Robert M. Whelan, Jr. Robert M. Whelan, Jr.	Director	March 15, 2011
/s/ Wayne Wilson Wayne Wilson	Director	March 15, 2011

ARIAD Pharmaceuticals, Inc.

Form 10-K for the year ended December 31, 2010

Exhibit List

Exhibit Number		Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/ Reg. Number
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.		S-3 (Exhibit 4.5)	10/14/94	33-85166
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
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

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		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
10.18		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
10.19		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
10.20	.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
10.21		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
10.22		Director Compensation Arrangements+		10-Q (Exhibit 10.2)	08/09/10	000-21696
10.23		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						
10.24	.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
10.25		ARIAD Pharmaceuticals, Inc. 1991 Stock Option Plan for Directors+		10 (Exhibit 10.15)	04/30/93	000-21696
10.26	.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
10.27		Amended and Restated ARIAD Pharmaceuticals, Inc. 1997 Employee Stock Purchase Plan+		Def 14A (Appendix A)	04/30/09	000-21696
10.28		ARIAD Pharmaceuticals, Inc. 2001 Stock Plan, as amended and restated+		10-Q (Exhibit 10.3)	11/09/05	000-21696

10.29	.1	ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan, as amended+		Def 14A (Appendix A)	04/30/09	000-21696
	.2	Form of Stock Option Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+		10-Q (Exhibit 10.2)	08/08/06	000-21696
	.3	Form of Stock Grant Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+		10-Q (Exhibit 10.3)	08/08/06	000-21696
	.4	Form of Restricted Stock Unit Certificate under the ARIAD Pharmaceuticals, Inc. 2006 Long-Term Incentive Plan+		10-Q (Exhibit 10.4)	08/08/06	000-21696
21.1		Subsidiaries of ARIAD Pharmaceuticals, Inc.		10-K (Exhibit 21.1)	03/16/09	000-21696
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.