

**SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**POST-EFFECTIVE AMENDMENT NO. 1
TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

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 Number)

**26 Landsdowne Street
Cambridge, Massachusetts 02139-4234
(617) 494-0400**

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

**Lee C. Steele
Senior Vice President and Chief Financial Officer
ARIAD Pharmaceuticals, Inc.
26 Landsdowne Street
Cambridge, Massachusetts 02139-4234
(617) 494-0400**

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

With a copy to:

**Edward P. Gonzales, Esquire
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
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1615 L Street, N.W.
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(202) 682-7147**

Approximate date of commencement of proposed sale to the public:

From time to time after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. []

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 other than securities offered only in connection with dividend or interest reinvestment, check the following box. [X]

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. []

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

TABLE OF CONTENTS

<u>PROSPECTUS</u>	
<u>PROSPECTUS SUMMARY</u>	
<u>THE OFFERING</u>	
<u>RISK FACTORS</u>	
<u>FORWARD-LOOKING STATEMENTS</u>	
<u>USE OF PROCEEDS</u>	
<u>WHERE TO FIND MORE INFORMATION</u>	
<u>INCORPORATION OF DOCUMENTS BY REFERENCE</u>	
<u>PLAN OF DISTRIBUTION</u>	
<u>LEGAL MATTERS</u>	
<u>EXPERTS</u>	
<u>INDEMNIFICATION</u>	
<u>PART II. INFORMATION NOT REQUIRED IN PROSPECTUS</u>	
<u>Item 14. Other Expenses of Issuance and Distribution</u>	
<u>Item 15. Indemnification of Directors and Officers</u>	
<u>Item 16. Exhibits</u>	
<u>Item 17. Undertakings</u>	
<u>SIGNATURES</u>	
<u>EXHIBIT INDEX</u>	
<u>EX-23.1 CONSENT OF DELOITTE & TOUCHE LLP</u>	

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

PROSPECTUS

Subject to Completion, dated May 18, 2001

ARIAD PHARMACEUTICALS, INC.

2,642,976 Shares of Common Stock

- This prospectus will allow us to issue common stock over time. This means:
 - we will provide a prospectus supplement each time we issue common stock;
 - the prospectus supplement will inform you about the specific terms of that offering and also may add, update or change information contained in this document; and
 - you should read this document and any prospectus supplement carefully before you invest.
- The 2,642,976 shares covered by this prospectus represent the unsold balance of 3,500,000 shares registered on our shelf registration statement in June 2000.
- Our common stock trades on the Nasdaq National Market under the symbol "ARIA."
- Our address is 26 Landsdowne Street, Cambridge, Massachusetts 02139-4234, and our telephone number is (617) 494-0400.

This Investment Involves A High Degree of Risk.

You Should Purchase Shares Only If You Can Afford A Complete Loss.

See "Risk Factors" Beginning on Page 4.

On May 17, 2001, the closing sale price of one share of our common stock as quoted on the Nasdaq National Market was \$4.78.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2001

Table of Contents

	<u>Page</u>
Prospectus Summary	1
The Offering	3
Risk Factors	4
Forward-Looking Statements	11
Use of Proceeds	12
Where to Find More Information	12
Incorporation of Documents by Reference	13
Plan of Distribution	14
Legal Matters	17
Experts	17
Indemnification	18

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. This prospectus is not an offer to sell or a solicitation of an offer to buy our common stock in any jurisdiction where it is unlawful. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock. This preliminary prospectus is subject to completion prior to this offering.

“ARIAD,” the ARIAD logo, ARGENT, RPD and RGE are trademarks of ARIAD Pharmaceuticals, Inc. Other trademarks and trade names appearing in this prospectus are the property of their holders. The domain name and website address www.ariad.com, and all rights thereto, are registered in the name of and owned by ARIAD Pharmaceuticals, Inc. The information on our website is not intended to be a part of this prospectus.

PROSPECTUS SUMMARY

You must also consult the more detailed financial statements, and notes to financial statements, incorporated by reference in this prospectus. This prospectus contains forward-looking statements and actual results could differ materially from those projected in the forward-looking statements as a result of certain of the risk factors as outlined in this prospectus.

The Company

We are engaged in developing innovative pharmaceutical product candidates based on small-molecule drugs and our proprietary gene regulation technology platforms. We integrate functional genomics and proteomics, protein engineering, and structure-based drug design in our drug discovery process. All of our product candidates work through small-molecule regulation of cellular processes.

We currently have four development programs:

- a dual-action drug candidate for osteoporosis that both blocks bone resorption and stimulates bone formation;
- a drug candidate for cancer that blocks cell proliferation and tumor growth;
- a regulated cell therapy product candidate for graft-vs-host disease, or GvHD, that selectively eliminates donor T-cells following allogeneic bone marrow transplantation, or BMT, if they attack the patient's own tissues; and
- a protein therapy for anemia that provides precisely controlled erythropoietin production *in vivo* using an orally administered drug.

We have planned phase 2 clinical studies of our GvHD product candidate in patients with various types of cancer and non-malignant diseases undergoing BMT. We also have a series of follow-on programs, including regulated stem cell therapies and potential treatments for inflammation and autoimmune diseases.

Our benchmark gene regulation platform technologies, known as ARGENT, RPD, and RGE, already are being used by approximately 400 academic investigators worldwide for scientific research and are the subject of over 100 papers published in the scientific literature. In return for providing the technologies for academic research, we receive some intellectual property and commercialization rights to discoveries made as a result of their use. Commercial licenses to these technologies also are available to pharmaceutical and biotechnology companies for use in their drug discovery efforts. Additionally, our technologies are available for collaborative development of novel gene and cell therapy products.

In our protein therapy programs, our gene regulation platform technologies provide:

- sustained, long-term delivery of therapeutic proteins (ARGENT);
- repeated, short bursts of protein delivery (RPD); and
- potent activation of endogenous and engineered genes (RGE).

In our regulated cell therapy program, the technologies feature highly efficient gene transfer, cell-growth or cell-death switches that are controlled with small-molecule drugs, and broad applicability to both primary and stem cells (e.g., regenerative medicine). A safety feature that distinguishes our gene regulation technologies from others is that gene activity can be terminated by withdrawal of the regulating small-molecule drug.

Our business strategy balances potential near-term revenues with longer term product development opportunities. We plan to:

- develop our current lead product candidates at least through phase 2 clinical trials;
- establish the commercial infrastructure to market certain of our lead products in selected markets and/or indications;
- pursue collaborative partnerships for other markets and products;
- license our platform technologies to selected biotechnology and pharmaceutical companies to help accelerate their genomics, proteomics, and drug discovery programs; and
- partner these technologies for joint development of novel products, especially with companies that have proprietary therapeutic genes, cellular systems (e.g., stem cells) or gene delivery vectors.

We were incorporated in Delaware in 1991. Our address is ARIAD Pharmaceuticals, Inc., 26 Landsdowne Street, Cambridge, Massachusetts 02139-4234, and our telephone number is (617) 494-0400.

The Offering

Common stock offered	2,642,976 shares
Common stock to be outstanding after the offering	30,080,929 shares
Use of proceeds	We anticipate using the net proceeds from this offering to fund research, development and product manufacturing, to acquire or invest in businesses, products and technologies, to provide working capital and for general corporate purposes. See “Use of Proceeds.”
Nasdaq National Market symbol	ARIA

The number of shares of common stock to be outstanding after the offering is based on the number of shares outstanding as of May 17, 2001 and excludes:

- 3,748,835 shares of common stock reserved for issuance pursuant to outstanding stock options at a weighted average exercise price of \$4.13 per share;
- 142,956 shares available for issuance under our 1991 Stock Option Plan for Employees and Consultants and our 1994 Stock Option Plan for Non-Employee Directors;
- 408,426 shares available for issuance under our Employee Stock Purchase Plan; and
- 1,330,000 shares that may become available for issuance under our 2001 Stock Plan, which has been submitted for adoption at our upcoming 2001 annual meeting of stockholders.

RISK FACTORS

Investing in our common stock is very risky. You should be able to bear a complete loss of your investment. You should carefully consider the following factors, in addition to other information contained elsewhere in this prospectus or incorporated by reference into this prospectus from our other SEC filings.

Risks Relating to Our Business

We may never succeed in developing marketable drugs or generating product revenues.

We are an early-stage company with no product revenues, and we may not succeed in producing pharmaceutical products for commercialization. We do not expect to have any products on the market for several years, if at all. Our main focus is primarily in conducting research and product development to advance the complex and specialized technologies we are developing. We are exploring human diseases at the cellular level. We seek to discover which genes within cells malfunction to cause disease, which signals are triggered within cells during the disease process to cause these cells to respond abnormally, and which drugs can halt or reverse those activities within cells. We also seek to discover multiple regulated gene therapies and regulated cell therapies that can treat or prevent disease. As with all science, we face much trial and error, and we may fail at numerous stages along the way. If we are not successful in developing marketable products, we will not be profitable.

We may be unable to access vectors, or other gene transfer technologies that we will need to commercialize our gene and cell therapy product candidates.

We may not be able to access the vector technologies required to develop and commercialize our gene and cell therapy product candidates. We do not own gene delivery technologies and are reliant on our ability to enter into license agreements with appropriate academic institutions and/or gene therapy companies that can provide us with rights to the necessary technology and components of gene delivery systems. The inability to reach an appropriate agreement with such an entity on reasonable commercial terms could delay or prevent the preclinical evaluation, clinical testing, and/or commercialization of our product candidates. Since some of our potential products are based on gene therapy, our inability to access gene transfer technology would have significant adverse effects on a significant portion of our product candidates. If we do not market our product candidates, we will never become profitable. In addition, the intellectual property landscape covering gene transfer technologies is currently uncertain and fragmented. Accordingly, if we select one partner as a source for selected intellectual property rights, we may find that we have not licensed sufficient rights to be able to commercialize our products, or we may be forced to acquire additional rights or discontinue marketing our product candidates unexpectedly.

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

We have incurred significant operating losses in each year since our formation in 1991 as a Delaware corporation through 2000 and have an accumulated deficit of approximately \$92.9 million from our operations through March 31, 2001. It is likely that significant operating losses will continue for the foreseeable future. We currently have no product revenues or commitments for future research revenues, may never be able to earn such revenue, and may never have profitable operations, even if we are able to commercialize any of our product candidates or enter into additional research agreements. If our losses continue and we are unable to successfully develop, commercialize, manufacture and market product candidates, we may never have product revenues or achieve profitability. Losses have resulted principally from costs incurred in research and development of product candidates and from general and administrative costs associated with our operations.

Insufficient funding may jeopardize our research and development programs and may prevent commercialization of our products and technologies.

All of our operating revenue to date has been generated through collaborative research agreements that have expired or been terminated. Accordingly, we may not be able to secure the significant funding levels which are required to maintain and continue each of our research and development programs at the current levels or at levels that may be required in the future. We do not have any committed strategic alliance funding for the advancement of any of our programs. Although we intend to seek additional funding from collaborations or public or private financings, these may not be available on terms acceptable to us, or at all. If we cannot secure adequate financing, we may be required to delay, scale back or eliminate one or more of our research and development programs or to enter into license arrangements with third parties to commercialize products or technologies that we would otherwise seek to develop ourselves.

Because we do not own all of the outstanding stock of our subsidiary, ARIAD Gene Therapeutics, Inc., or AGTI, we may not realize all of the potential future economic benefit from products developed based on technology licensed to or owned by our subsidiary.

Our subsidiary, AGTI, holds licenses from Harvard University, Stanford University, and other universities relating to ARGENT, a key technology in our regulated gene and cell therapy product development programs. Minority stockholders, including Harvard University, Stanford University and certain current and former members of our management, own slightly less than 20% of the issued and outstanding capital stock of AGTI. We do not currently have a license agreement with AGTI that provides us with rights to develop and commercialize products based on the licenses relating to ARGENT. In order to commercialize any product based on this technology, we will either license this technology on terms to be determined or commercialize these products directly through AGTI. The economic benefit to our stockholders from products we commercialize will be diluted by any royalties paid under a future license agreement, if any, with AGTI. The economic benefit to our stockholders from products, if any, AGTI may commercialize would be reduced in an amount related to the percentage owned by the minority stockholders of AGTI.

Alternatively, we may acquire all of the interests of the minority stockholders in AGTI for cash, shares of our common stock or other securities of ours, if any. If we acquire these minority interests for either form of consideration, it will result in dilution to our stockholders. The economic value of the minority stockholders' interest is difficult to quantify in the absence of a public market, and the market price of our publicly traded common stock may not accurately reflect its value. Accordingly, the market could change its perception of the value of this minority interest in our subsidiary at any time in reaction to our increased emphasis on these products, announcements regarding these products or for other reasons, any of which could result in a decline in our stock price. In addition, if we acquire the minority interest at a cost greater than the value attributed to them by the market, this also could result in a decline in our stock price. If we choose to acquire these interests through a short-form merger in which we do not solicit the consent of the minority stockholders of AGTI, we could become subject to an appraisal procedure, which would result in additional expense and diversion of management resources.

Because certain members of our management team and Board of Directors beneficially own a significant percentage of the capital stock of our subsidiary, AGTI, there may be conflicts of interest present in dealings between ARIAD and AGTI.

Four members of our management team and/or Board of Directors own or have the right to acquire up to approximately 6% of the outstanding capital stock of AGTI. These same individuals beneficially own approximately 8% of our outstanding common stock. As a result, the market may perceive conflicts of interest to exist in dealings between AGTI and us. AGTI is the exclusive licensee of the ARGENT intellectual property from Harvard University and Stanford University and, in the event that we commercialize products based on ARGENT,

we will have to negotiate the terms of a license agreement with AGTI or acquire all of the capital stock of AGTI. Because of the apparent conflicts of interest, the market may be more inclined to perceive the terms of any transaction between us and AGTI as being unfair to us.

We have no experience in manufacturing any of our product candidates on a commercial basis, which raises uncertainty as to our ability to commercialize our product candidates.

We have no experience in, and currently lack the resources and capability to, manufacture any of our product candidates on a commercial basis. Our ability to conduct clinical trials and commercialize our product candidates will depend, in part, on our ability to manufacture our products on a large scale, either directly or through third parties, at a competitive cost and in accordance with FDA and other regulatory requirements. We currently do not have the capacity to manufacture drugs in large quantities. We depend on third-party manufacturers or collaborative partners for the production of our product candidates for preclinical research and clinical trials and intend to use third-party manufacturers to produce any products we may eventually commercialize. If we are not able to obtain contract manufacturing on commercially reasonable terms, we may not be able to conduct or complete clinical trials or commercialize our product candidates, and we do not know whether we will be able to develop such capabilities.

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.

We currently have no sales, marketing or distribution capabilities. If we are unable to establish sales, marketing or distribution capabilities either by developing our own sales, marketing and distribution organization or by entering into agreements with others, we may be unable to successfully sell any products we are able to begin to commercialize. If we are unable to effectively sell our products, our ability to generate revenues will be harmed. 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 physicians and insurers, we will not be successful.

Our success is dependent on acceptance of our product candidates. They may not achieve significant market acceptance among patients, physicians or third-party payors, even if we obtain necessary regulatory and reimbursement approvals. Failure to achieve significant market acceptance will harm our business. We believe that recommendations by physicians and health care payors will be essential for market acceptance of any product candidates. In the past, there has been concern regarding the potential safety and effectiveness of gene therapy products. Physicians and health care payors may conclude that any of our product candidates are not safe.

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 Chief Executive Officer, Harvey J. Berger, our Chief Patent Counsel, David Bernstein, and our Senior Vice President, Drug Development, John D. Iulicci, and other key officers and members of our scientific staff responsible for areas such as clinical development, drug discovery, cell biology and genomics, structure-based drug design and protein engineering are important to our specialized scientific business. We also are dependent upon a few of our scientific advisors to assist in formulating our research and development strategy. The loss of, and failure to promptly replace, any one of this group could significantly delay and may prevent the achievement of our research, development and business objectives. While we have entered into employment agreements with all of our officers, they may not remain with us.

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, who have substantially greater capital, research and development capabilities and experience than us, are presently engaged in:

- developing products based on signal transduction, genomics and proteomics, structure-based drug design, and gene and cell therapy, and
- conducting research and development programs for the treatment of all the disease areas in which we are focused.

Some of these entities already have product candidates in clinical trials or in more advanced preclinical studies than we do. They may succeed in commercializing competitive products before us, which would give them 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. If we are unable to compete in our chosen markets, we will not become profitable.

We may not be able to protect our intellectual proprietary rights.

We and our licensors have pending patent applications covering biochemical and cellular tests useful in drug discovery, new chemical compounds discovered in our drug discovery programs, certain components, configurations and uses of our ARGENT, RPD, and RGE systems and methods and materials for conducting genomics research. These patent applications may not issue as patents and may not issue in all countries in which we develop, manufacture or sell our products. In addition, patents issued to us or our licensors may be challenged and 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 them. 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 and compositions that are related to our business and may cover or conflict with our patent applications. 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 proprietary protection for any of these technologies, we may be required to challenge such protections, terminate or modify our programs that rely on such technologies or obtain licenses for use of these technologies.

We may be unable to develop or commercialize our product candidates, if we are unable to obtain or maintain certain licenses.

We have entered into license agreements for some of our technologies, either directly or through AGTI. We are currently attempting to obtain additional licenses for technology useful to our programs. 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 our product candidates. We also use gene sequences or proteins encoded by those sequences and other biological materials in each of our research programs which are, or may become, patented by others and to which we would be required to obtain licenses in order to develop or market our product candidates. Some of our programs, including our regulated gene therapy program, may require the use of multiple proprietary technologies, especially vectors and therapeutic genes. Obtaining licenses for these 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. 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 where we have obtained exclusive rights, would materially and adversely affect our ability to develop and market products based on our licensed technologies.

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, and we may not be able to avoid significant product liability exposure. 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. 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 we develop.

Risks Relating to Governmental Approvals

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 FDA and foreign regulatory requirements. We have limited experience in conducting the preclinical studies and clinical trials necessary to obtain regulatory approval. Consequently, we may encounter problems in clinical trials that may cause us or the FDA or foreign regulatory agencies to delay, suspend or terminate these trials. If the clinical trials of our products fail, we will not be able to market our product candidates. Problems we may encounter include the chance that we may not be able to conduct clinical trials at preferred sites, obtain sufficient test subjects or begin or successfully complete clinical trials in a timely fashion, if at all. Furthermore, we, the FDA or foreign regulatory agencies may suspend clinical trials at any time if we or they believe the subjects participating in the trials are being exposed to unacceptable health risks or if we or they find deficiencies in the clinical trial process or conduct of the investigation. The FDA and foreign regulatory agencies could also require additional clinical trials, which would result in increased costs and significant development delays. Our failure to adequately demonstrate the safety and effectiveness of a therapeutic drug under development could delay or prevent regulatory approval of the product candidate and could have a material adverse effect on our business.

Adverse medical events and/or a hostile regulatory and political environment could delay or prevent the commercialization of our gene therapy product candidates.

The death in 1999 of a patient in a clinical trial of adenovirus-mediated gene therapy has heightened awareness of the potential risks associated with early-stage clinical evaluation of gene therapies. In addition, several deaths in other gene therapy clinical trials have been publicized. While not apparently caused by the gene transfer procedure, these deaths were not promptly reported to the FDA. As a result of these events, the field of

gene therapy has come under greater scrutiny from regulatory authorities, politicians and the public at large. Although we do not anticipate using adenoviral vectors in our product candidates, the new environment of greater scrutiny for gene therapy may significantly delay the development of our gene and cell therapy product candidates. We may be required to conduct more extensive preclinical testing in order to perform clinical trials on our product candidates. Regulatory approval of our gene and cell therapy product candidates may require more extensive clinical studies than anticipated, which could delay commercialization of our gene and cell therapy product candidates. Further adverse events in gene therapy trials and/or decisions of regulatory and other governmental agencies could result in a moratorium or even termination of all clinical studies on gene therapy at some or all medical centers in the United States or other countries. Such events could seriously jeopardize the development and commercialization of our gene and cell therapy product candidates. In addition, should our product candidates be approved for marketing, adverse public perception of the gene therapy field may limit our ability successfully to market any gene and cell therapy products.

We may not be able to obtain government regulatory approval for our product candidates prior to marketing.

To date, we have not submitted a marketing application for any product candidate to the FDA or any foreign regulatory agency, and none of our product candidates have been approved for commercialization in the United States or elsewhere. Any product candidate ready for commercialization would be subject to an extensive and lengthy governmental regulatory approval process in the United States and in other countries. We may not be able to obtain regulatory approval for any products we develop or even if approval is obtained, the labeling for such products may be required to bear limitations that could materially impact the marketability and profitability of the product involved. We have no history of conducting and managing the clinical testing necessary to obtain such regulatory approval. Satisfaction of these regulatory requirements, which includes satisfying the FDA and foreign regulatory authorities that the product is both safe and effective under its recommended conditions of use, typically takes several years or more depending upon the type, complexity and novelty of the product and requires the expenditure of substantial resources.

Furthermore, the regulatory requirements governing our potential products are uncertain. This uncertainty 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 useful, as demonstrated by clinical trials, and our products will be subject to ongoing regulatory reviews. Although we have been granted orphan drug designation by the FDA for AP1903, the small-molecule drug used in our GvHD cell therapy product candidate, this designation may be challenged by others or may prove to be of no practical benefit.

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

Before we can begin to commercially manufacture our product candidates, we must either secure manufacturing in an approved manufacturing facility or obtain regulatory approval of our own manufacturing facility and process. In addition, manufacture of our product candidates must comply with the FDA's current Good Manufacturing Practices requirements, commonly known as cGMP. The cGMP requirements govern, among other things, quality control and documentation policies and procedures. We, or any third-party manufacturer of our product candidates, may not be able to comply with cGMP requirements, which would prevent us from selling such products. Material changes to the manufacturing processes of our products after approvals have been granted are also subject to review and approval by the FDA or other regulatory agencies.

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

If we succeed in bringing our product candidates to the market, they may not be considered cost-effective, and reimbursement to the consumer may not be available or may not be sufficient to allow us to sell our products on a competitive basis. In both the United States and elsewhere, sales of medical products and treatments are dependent, in part, on the availability of reimbursement to the consumer from third-party payors, such as government and private insurance plans. Third-party payors are increasingly challenging the prices charged for pharmaceutical products and services. Our business is affected by the efforts of government and third-party payors to contain or reduce the cost of health care through various means. In the United States, there have been and will continue to be a number of federal and state proposals to implement government controls on pricing. In addition, the emphasis on managed care in the United States has increased and will continue to increase the pressure on the pricing of pharmaceutical products. We cannot predict whether any legislative or regulatory proposals will be adopted or the effect these proposals or managed care efforts may have on our business.

Risks Relating to Our Common Stock

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

As a biopharmaceutical company, we have experienced significant volatility in our common stock. Fluctuations in our operating results and general market conditions for biotechnology stocks could have a significant impact on the volatility of our common stock price. During 2000, our stock price ranged from a high of \$48.50 to a low of \$2.50, and from January 1, 2001 to May 17, 2001 our stock price has ranged from a high of \$8.38 to a low of \$2.78. Factors contributing to such volatility include:

- results of preclinical studies and clinical trials,
- evidence of the safety or effectiveness of pharmaceutical products,
- announcements of new collaborations,
- failure to enter into collaborations,
- our funding requirements,
- announcements of technological innovations or new therapeutic products,
- governmental regulation, including gene therapy oversight,
- healthcare legislation,
- developments in patent or other proprietary rights, including litigation,
- general market trends for the biotechnology industry and related high technology industries,
- the impact of changing interest rates and policies of the Federal Reserve, and
- public policy pronouncements.

FORWARD-LOOKING STATEMENTS

Some of the statements under the captions “Prospectus Summary,” “Risk Factors” and “Use of Proceeds” and elsewhere in this prospectus are “forward-looking statements” concerning our operations, economic performance and financial condition. These forward-looking statements include, but are not limited to, statements about our plans, objectives, expectations and intentions and other statements contained in the prospectus that are not historical facts. When used in this prospectus, the words “anticipates,” “believes,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “seeks,” “should” or “will” or the negative of these terms or similar expressions are generally intended to identify forward-looking statements. Forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, and within the meaning of Section 21E of the Securities Exchange Act of 1934, are included, for example, in the discussions about:

- our strategy;
- sufficiency of our cash resources;
- revenues from existing and new collaborations;
- product development;
- our research and development and other expenses; and
- our operational and legal risks.

These forward-looking statements involve risks and uncertainties. Actual results may differ materially from those expressed or implied in those statements. Factors that could cause these differences include, but are not limited to, those discussed under “Risk Factors.”

USE OF PROCEEDS

We cannot guarantee that we will receive any proceeds in connection with this offering.

We intend to use the net proceeds of this offering, if any, to fund research, development and product manufacturing, to provide working capital and for general corporate purposes. We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own, although no acquisitions are planned or being negotiated as of the date of this prospectus, and no portion of the net proceeds has been allocated for any specific acquisition. Pending these uses, the net proceeds will be invested in investment-grade, interest-bearing securities.

The principal purposes of this offering are to increase our capitalization and our operating and financial flexibility. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds we will have upon completion of this offering. Accordingly, our management will have broad discretion in the application of net proceeds, if any.

Based on the historical spending levels required to support our operations, we believe that our available cash and existing sources of revenue, if any, together with proceeds of this offering, if any, and interest earned thereon, will be adequate to satisfy our capital and operating requirements until at least the end of the year 2002. However, changes in our research and development plans or other future events affecting our revenues or operating expenses may result in the earlier depletion of our funds.

WHERE TO FIND MORE INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934 and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at Judiciary Plaza, 450 Fifth Street, N.W., Room 1200, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's Web site at <http://www.sec.gov>. Our common stock is listed on the Nasdaq National Market, and you can read and inspect our filings at the offices of the National Association of Securities Dealers, Inc. at 1735 K Street, Washington, D.C. 20006.

This prospectus is only part of a Registration Statement on Form S-3 that we have filed with the SEC under the Securities Act of 1933 and therefore omits certain information contained in the Registration Statement. We have also filed exhibits and schedules with the Registration Statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may inspect a copy of the Registration Statement, including the exhibits and schedules, without charge, at the public reference room or obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a Registration Statement on Form S-3 under the Securities Act of 1933 with the SEC with respect to the common stock being offered pursuant to this prospectus. This prospectus omits certain information contained in the Registration Statement, as permitted by the SEC. You should refer to the Registration Statement, including the exhibits, for further information about us and the common stock being offered pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the Registration Statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the Registration Statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above. We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until we sell all of our shares of common stock. The documents we are incorporating by reference are:

- Annual Report on Form 10-K for the year ended December 31, 2000, filed on March 29, 2001;
- Quarterly Report on Form 10-Q for the quarter ended March 31, 2001, filed on May 14, 2001; and
- The description of the common stock contained in our Registration Statement on Form 10 filed with the SEC on June 25, 1993, including any amendments or reports filed for the purpose of updating such description.

Upon request, we will provide without charge to each person to whom a copy of this prospectus has been delivered a copy of any information that was incorporated by reference in the prospectus (other than exhibits to documents, unless the exhibits are specifically incorporated by reference into the prospectus). We will also provide upon request, without charge to each person to whom a copy of this prospectus has been delivered, a copy of all documents filed by us from time to time with the SEC pursuant to the Securities Exchange Act of 1934. Requests for copies should be directed to:

Lee C. Steele
Senior Vice President
and Chief Financial Officer
ARIAD Pharmaceuticals, Inc.
26 Landsdowne Street
Cambridge, MA 02139-4234
(617) 494-0400

This prospectus is part of a Registration Statement we filed with the SEC. You should rely only on the information incorporated by reference in or provided in this prospectus and the Registration Statement. We have not authorized any other person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front of this document.

PLAN OF DISTRIBUTION

General

We may offer the common stock from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. The common stock may also be sold pursuant to what is known as an equity line of credit, as described below under the heading “—Equity Line of Credit.” We may sell the common stock (1) through underwriters or dealers, (2) through agents, and/or (3) directly to one or more purchasers. We may distribute the common stock from time to time in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to the prevailing market prices; or
- negotiated prices.

We may directly solicit offers to purchase the common stock being offered by this prospectus. We may also designate agents to solicit offers to purchase the common stock from time to time. We will name in a prospectus supplement any agent involved in the offer or sale of our common stock.

If we utilize a dealer in the sale of the common stock being offered by this prospectus, we will sell the common stock to the dealer, as principal. The dealer may then resell the common stock to the public at varying prices to be determined by the dealer at the time of resale.

If we utilize an underwriter in the sale of the common stock being offered by this prospectus, we will execute an underwriting agreement with the underwriter at the time of sale, and we will provide the name of any underwriter in the prospectus supplement which the underwriter will use to make resales of the common stock to the public. In connection with the sale of the common stock, we, or the purchasers of our common stock for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the common stock to or through dealers, and the underwriter may compensate those dealers in the form of discounts, concessions or commissions.

In the event we enter into an agreement regarding an equity line of credit which contemplates an “at the market” equity offering, other than the equity line of credit arrangement described below, we will file a post-effective amendment to this registration statement that identifies the underwriters in that “at the market” equity offering.

With respect to underwritten public offerings, negotiated transactions and block trades, we will provide in the applicable prospectus supplement any compensation we pay to underwriters, dealers or agents in connection with the offering of the common stock, and any discounts, concessions or commissions allowed by underwriters to participating dealers. Underwriters, dealers and agents participating in the distribution of the common stock may be deemed to be underwriters within the meaning of the Securities Act of 1933, as amended, and any discounts and commissions received by them and any profit realized by them on resale of the common stock may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof.

Shares of our common stock sold pursuant to the registration statement of which this prospectus is a part will be authorized for quotation and trading on the Nasdaq National Market. To facilitate the offering of the common stock, other than the common stock offered through an equity line of credit, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock. This may include over-allotments or short sales of the common stock, which involve the sale by persons participating in the offering of more shares of common stock than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the common stock by bidding for or purchasing the common stock in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if the shares of common stock sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

The underwriters, dealers and agents may engage in other transactions with us, or perform other services for us, in the ordinary course of their business.

Equity Line of Credit

On June 27, 2000, we entered into what is sometimes termed an equity line of credit arrangement with Acqua Wellington North American Equities Fund, Ltd. Specifically, we entered into a common stock purchase agreement with Acqua Wellington, which provides that Acqua Wellington is committed to purchase up to \$75,000,000 of our common stock over the 18-month term of the purchase agreement. We reserved 2,800,000 shares of our common stock to satisfy our potential common stock delivery obligations under the purchase agreement. We filed the purchase agreement as an exhibit to our Current Report on Form 8-K filed with the SEC on July 7, 2000. The total amount of common stock available under the purchase agreement does not exceed 10% of the aggregate market value of our outstanding common stock that was held by our non-affiliates within sixty days prior to June 27, 2000. From time to time beginning in June 2000 and ending in December 2001 and at our sole discretion, we may present Acqua Wellington with draw down notices constituting offers to purchase our common stock over 15 consecutive trading days after the date of the draw down notice, or such other number of trading days as agreed upon by us and Acqua Wellington. Under the purchase agreement, we are able to present Acqua Wellington with up to 14 draw down notices during the term of the agreement, with a minimum of five trading days required between each draw down period.

Once presented with a draw down notice, Acqua Wellington is required to purchase a pro rata portion of the shares on each trading day during the trading period on which the daily volume weighted average price for our common stock exceeds a threshold price determined by us and set forth in the draw down notice. The per share purchase price for these shares equals the daily volume weighted average price of our common stock on each date during the draw down period on which shares are purchased, less a discount ranging from 3.5% to 6.0%, or such other percentage agreed upon by the parties, based on the threshold price for our common stock on the date we issue a draw down notice. If the daily volume weighted average price of our common stock falls below the threshold price on any trading day during a draw down period, the purchase agreement provides that Acqua Wellington will not be required to purchase the pro rata portion of shares of common stock allocated to that day. However, at its election, Acqua Wellington could buy the pro rata portion of shares allocated to that day at the threshold price less the discount described above.

The purchase agreement also provides that from time to time and at our sole discretion we may grant Acqua Wellington a call option to purchase additional shares of our common stock in an aggregate amount up to the applicable draw down amount requested by us in such draw down period. Upon Acqua Wellington's exercise of the call option, we will issue and sell the shares of our common stock subject to the call option at a price equal

to the greater of the daily volume weighted average price of our common stock on the day Acqua Wellington notifies us of its election to exercise its call option or the threshold price of our common stock, less the discount described above, based on the threshold price for our common stock on the date we issue a draw down notice.

In addition to our issuance of shares of common stock to Acqua Wellington pursuant to the purchase agreement, this prospectus also covers the sale of those shares from time to time by Acqua Wellington to the public. Acqua Wellington is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act.

Acqua Wellington has informed us that it intends to use Granite Financial Group, Inc. as the broker-dealer to sell shares of our common stock on the Nasdaq National Market. Such sales will be made on the Nasdaq National Market at prices and at terms then prevailing or at prices related to the then current market price. Granite Financial Group, Inc. is the same broker-dealer that Acqua Wellington used to sell shares of common stock it purchased from us in October 2000 pursuant to a draw down notice we delivered in September 2000. Granite Financial Group, Inc. is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act. We filed a prospectus supplement in October 2000, and in accordance with an interpretation released by the SEC Staff in May 2001, we are filing a post-effective amendment naming each of Acqua Wellington and Granite Financial Group, Inc. as an underwriter. Acqua Wellington has informed us that Granite Financial Group, Inc., which is not an affiliate of Acqua Wellington, will receive commissions from Acqua Wellington which will not exceed customary brokerage commissions. Acqua Wellington also will pay other expenses associated with the sale of the common stock it acquires pursuant to the purchase agreement.

The shares of common stock may be sold in one or more of the following manners:

- ordinary brokerage transactions and transactions in which the broker solicits purchasers; or
- a block trade in which the broker or dealer so engaged will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction.

In addition, Acqua Wellington and Granite Financial Group, Inc. will be subject to liability under the federal securities laws and must comply with the requirements of the Securities Act and the Securities Exchange Act of 1934, as amended, including without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of our common stock by Acqua Wellington or Granite Financial Group, Inc. Under these rules and regulations, Acqua Wellington and Granite Financial Group, Inc.:

- may not engage in any stabilization activity in connection with our common stock;
- must furnish each broker which offers shares of our common stock covered by this prospectus with the number of copies of this prospectus and any prospectus supplement which are required by each broker; and
- may not bid for or purchase any shares of our common stock or attempt to induce any person to purchase any shares of our common stock other than as permitted under the Exchange Act.

These restrictions may affect the marketability of the shares of our common stock to be sold by Acqua Wellington and Granite Financial Group, Inc.

Acqua Wellington has agreed that prior to and during the term of the purchase agreement, neither Acqua Wellington nor any of its affiliates will be in a short position with respect to shares of our common stock. During

the term of the purchase agreement, Acqua Wellington may sell the shares of our common stock that it has the right to purchase pursuant to the purchase agreement, but Acqua Wellington has agreed that it will not sell any other shares of our common stock. In addition, Acqua Wellington has agreed that it will not grant any option to purchase or acquire any right to dispose or otherwise dispose for value, any shares of our common stock or any securities convertible into, or exchangeable for, or warrants to purchase any shares of our common stock or any swap, hedge or other agreement that transfers, in whole or in part, the economic risk of ownership of our common stock.

We have agreed to indemnify and hold harmless Acqua Wellington and Granite Financial Group, Inc. against certain liabilities, including liabilities under the Securities Act, which may be based upon, among other things, any untrue statement or alleged untrue statement of a material fact contained in or incorporated by reference in the registration statement of which this prospectus is a part, or any omission or alleged omission to state in the registration statement or any document incorporated by reference in the registration statement, a material fact required to be stated therein or necessary to make the statements therein not misleading, unless made or omitted in reliance upon written information provided to us by Acqua Wellington or Granite Financial Group, Inc. We have agreed to pay all of Acqua Wellington's reasonable fees and expenses related to the transactions contemplated by the purchase agreement, except that we are obligated to pay only up to \$40,000 of the reasonable attorneys' fees and expenses (exclusive of disbursements and out-of-pocket expenses) incurred by Acqua Wellington in connection with the preparation, negotiation, execution and delivery of the purchase agreement. As of May 17, 2001, we have paid approximately \$29,000 in such attorneys' fees and expenses. We have also agreed to pay all reasonable fees and expenses incurred by Acqua Wellington in connection with any amendments, modifications or waivers of the purchase agreement, or incurred in connection with the enforcement of the purchase agreement, including without limitation, all reasonable attorneys' fees and expenses. We have also agreed to pay all stamp or similar taxes and duties levied in connection with the issuance of the shares of our common stock to Acqua Wellington.

Common Stock Purchase Agreement

On June 27, 2000, we entered into a common stock purchase agreement with Acqua Wellington pursuant to which Acqua Wellington purchased 680,851 shares of our common stock, which shares were registered on the Registration Statement of which this prospectus is a part, at a price of \$11.75 per share for an aggregate purchase price of \$8,000,000. We filed the purchase agreement as an exhibit to our Current Report on Form 8-K filed with the SEC on July 7, 2000.

LEGAL MATTERS

The validity of the issuance of the common stock offered in this prospectus is being passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., and certain members of their families and trusts for their benefit own an aggregate of approximately 4,000 shares of our common stock.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2000 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference, which report expresses an unqualified opinion and includes an explanatory paragraph referring to a change in accounting principle relating to start-up activities, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

INDEMNIFICATION

Section 145(a) of the General Corporation Law of the State of Delaware provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no cause to believe his conduct was unlawful.

Section 145(b) provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted under similar standards, except that no indemnification may be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the court in which such action or suit was brought shall determine that despite the adjudication of liability, such person is fairly and reasonably entitled to be indemnified for such expenses which the court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses actually and reasonably incurred by him in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and that the corporation may purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against him or incurred by him in any such capacity or arising out of his status as such whether or not the corporation would have the power to indemnify him against such liabilities under such Section 145.

Our Certificate of Incorporation, as amended, and By-laws, as amended, provide for indemnification of our directors and officers to the fullest extent permitted by law. The By-laws also permit the Board of Directors to authorize us to purchase and maintain insurance against any liability asserted against any director, officer, employee or agent of ours arising out of his capacity as such. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers, or controlling persons of ours pursuant to our Certificate of Incorporation, as amended, our By-laws, as amended, and the Delaware General Corporation Law, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in such Act and is therefore unenforceable.

As permitted by Section 102(b)(7) of the Delaware General Corporation Law, our Certificate of Incorporation, as amended, provides that our directors shall not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to us or our stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, relating to prohibited dividends or distributions or the repurchase or redemption of stock or (iv) for any transaction from which the director derives an improper personal benefit. As a result of this provision, we and our stockholders may be unable to obtain monetary damages from a director for breach of his or her duty of care.

Commission Policy

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

PART II. INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the Company's estimates (other than the SEC and Nasdaq registration fees) of the expenses in connection with the issuance and distribution of the shares of common stock being registered.

<u>Item</u>	<u>Amount</u>
SEC registration fee	\$10,511.00
Nasdaq listing fee	17,500.00
Legal fees and expenses	15,000.00
Accounting fees and expenses	5,000.00
Miscellaneous fees and expenses	1,989.00
Total	<u>\$50,000.00</u>

Item 15. Indemnification of Directors and Officers

See "Indemnification" contained in Part I hereof, which is incorporated herein by reference.

Item 16. Exhibits

<u>Exhibit Number</u>	<u>Description</u>
4.1	Certificate of Incorporation of the Company, as amended. (Filed as Exhibit 3.1 to the Registrant's Registration Statement on Form 10 filed with the Securities and Exchange Commission on June 25, 1993 and incorporated herein by reference.)
4.2*	Restated By-laws of the Company, as amended.
4.3	Amendment of Certificate of Incorporation of the Company, dated April 8, 1994. (Filed as Exhibit 3.3 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1993 filed with the Securities and Exchange Commission on April 15, 1994 and incorporated herein by reference.)
4.4	Amendment of Certificate of Incorporation of the Company, dated October 4, 1994. (Filed as Exhibit 3.4 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994 filed with the Securities and Exchange Commission on March 30, 1995 and incorporated herein by reference.)
4.5	Rights Agreement, dated as of June 8, 2000, between the Company and State Street Bank and Trust Company, which includes the Form of Certificate of Designations in respect of the Series A Preferred Stock, as Exhibit A, the Form of Right Certificate as Exhibit B and the Summary of Rights to Purchase Series A Preferred Stock as Exhibit C. (Previously filed and incorporated by reference to Form 8-A of the Company filed with the Securities and Exchange Commission on June 19, 2000).

- 4.6 Form of Common Stock Certificate (Previously filed and incorporated by reference to Registration Statement on Form 10 of the Company filed with the Securities and Exchange Commission on June 25, 1993).
- 5.1* Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. regarding legality
- 23.1 Consent of Deloitte & Touche LLP
- 23.2* Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (see Exhibit 5.1)
- 24.1* Power of Attorney (included on signature page)

* Previously filed.

Item 17. Undertakings

A. Rule 415 Offering.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. Filings Incorporating Subsequent Exchange Act Documents by Reference.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. Registration Statement Permitted by Rule 430A under the Securities Act of 1933.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

D. Request for Acceleration of Effective Date.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, may be permitted to directors, officers, and controlling persons of the registrant pursuant to the provisions described in Item 15 or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment No. 1 to Registration Statement on Form S-3 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge and Commonwealth of Massachusetts on the 18th day of May, 2001.

ARIAD PHARMACEUTICALS, INC

By /s/ Harvey J. Berger

Harvey J. Berger, M.D.
Chairman of the Board of Directors,
President and Chief Executive Officer

Each person whose signature appears below hereby appoints each of Harvey J. Berger and Lee C. Steele severally, acting alone and without the other, his/her true and lawful attorney-in-fact with the authority to execute in the name of each such person, any and all amendments (including without limitation, post-effective amendments) to this Registration Statement on Form S-3, to sign any and all additional registration statements relating to the same offering of securities as this Registration Statement that are filed pursuant to rule 462(b) of the Securities Act, and to file such registration statements with the Securities and Exchange Commission, together with any exhibits thereto and other documents therewith, necessary or advisable to enable the Registrant to comply with the Securities Act, and any rules, regulations and requirements of the Securities and Exchange Commission in respect thereof, which amendments may make such other changes in the Registration Statement as the aforesaid attorney-in-fact executing the same deems appropriate. Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to Registration Statement on Form S-3 has been signed below by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Harvey J. Berger</u> Harvey J. Berger, M.D.	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	May 18, 2001
<u>/s/ Lee C. Steele</u> Lee C. Steele	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	May 18, 2001
<u>*</u> Vaughn D. Bryson	Director	May 18, 2001
<u>*</u> John M. Deutch, Ph.D.	Director	May 18, 2001
<u>/s/ Tamar Howson</u> Tamar Howson	Director	May 18, 2001
<u>*</u> Jay R. LaMarche	Director	May 18, 2001

* _____ Sandford D. Smith	Director	May 18, 2001
* _____ Ralph Snyderman, M.D.	Director	May 18, 2001
* _____ Raymond S. Troubh	Director	May 18, 2001

* By executing his name hereto, Harvey J. Berger is signing this document on behalf of the persons indicated above pursuant to powers of attorney duly executed by such persons and filed with the SEC.

By: /s/ Harvey J. Berger

Harvey J. Berger
(Attorney-in-fact)

EXHIBIT INDEX

Exhibit Number	Description
4.1	Certificate of Incorporation of the Company, as amended. (Filed as Exhibit 3.1 to the Registrant's Registration Statement on Form 10 filed with the Securities and Exchange Commission on June 25, 1993 and incorporated herein by reference.)
4.2*	Restated By-laws of the Company, as amended.
4.3	Amendment of Certificate of Incorporation of the Company, dated April 8, 1994. (Filed as Exhibit 3.3 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1993 filed with the Securities and Exchange Commission on April 15, 1994 and incorporated herein by reference.)
4.4	Amendment of Certificate of Incorporation of the Company, dated October 4, 1994. (Filed as Exhibit 3.4 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994 filed with the Securities and Exchange Commission on March 30, 1995 and incorporated herein by reference.)
4.5	Rights Agreement, dated as of June 8, 2000, between the Company and State Street Bank and Trust Company, which includes the Form of Certificate of Designations in respect of the Series A Preferred Stock, as Exhibit A, the Form of Right Certificate as Exhibit B and the Summary of Rights to Purchase Series A Preferred Stock as Exhibit C. (Previously filed and incorporated by reference to Form 8-A of the Company filed with the Securities and Exchange Commission on June 19, 2000).
4.6	Form of Common Stock Certificate (Previously filed and incorporated by reference to Registration Statement on Form 10 of the Company filed with the Securities and Exchange Commission on June 25, 1993).
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. regarding legality
23.1	Consent of Deloitte & Touche LLP
23.2*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (see Exhibit 5.1)
24.1*	Power of Attorney (included on signature page)

* Previously filed.