



FORM 10-K

ARIAD PHARMACEUTICALS INC - ARIA

Exhibit:

Filed: March 28, 2000 (period: December 31, 1999)

Annual report which provides a comprehensive overview of the company for the past year

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K

(MARK ONE)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED DECEMBER 31, 1999

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 _____

ARIAD PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

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

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: NONE

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

COMMON STOCK, \$.001 PAR VALUE

COMMON STOCK PURCHASE WARRANTS

RIGHTS TO PURCHASE SERIES A PREFERRED STOCK

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 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.

The number of shares of the registrant's Common Stock outstanding as of March 16, 2000: 24,458,228. The number of Common Stock Purchase Warrants outstanding as of March 16, 2000: 2,054,836.

The aggregate market value of the voting stock held by nonaffiliates of the registrant was approximately \$511 million as of March 16, 2000, based on the last reported sales price of the registrant's Common Stock on the Nasdaq National Market on such date.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement (the "Proxy Statement") to be used in connection with the Registrant's 2000 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

ITEM 1. BUSINESS

OVERVIEW

We are a biopharmaceutical company focused on the discovery, development and commercialization of proprietary platform technologies and therapeutic products based on gene regulation and signal transduction. Our core competencies in functional genomics, protein engineering and structure-based drug design allow us to capitalize on the wealth of genetic information being generated by government, academic and commercial laboratories. We apply this expertise to the development of proprietary technology platforms that allow manipulation of signal transduction, gene transcription, and protein secretion events using small-molecule drugs. We believe that our ability to control the activity of genes and proteins allows us to broadly apply discoveries in genomics to the development of innovative therapeutic products.

Our major areas of technology and product development are based on our proprietary methods of intervention in cellular processes, including the activation of genes. In our regulated gene therapy program, we are developing products, regulated by small-molecule drugs, for turning on signal transduction, gene transcription, and protein secretion events. In our signal transduction inhibitor program, we are developing orally active small-molecule drugs to turn off specific signal transduction pathways that are critically involved in disease. We have 12 product candidates in various stages of research and development, including one preparing to enter Phase 2 clinical trials, two in preclinical development and nine in earlier stage research. These product candidates target large markets that are inadequately served by currently available therapies. We plan to develop some of our product candidates ourselves. In addition, we intend to commercialize our enabling platform technologies by licensing them to pharmaceutical and biotechnology companies for their research and product development programs.

THE GENOMICS REVOLUTION AND ITS CHALLENGES

The completion of the human genome project will provide broad access to genetic information. These data represent a blueprint of the body's genetic makeup, which is the first step in discovering the pathways that cause disease and defining proteins of potential therapeutic importance. Historically, many drugs were developed without full appreciation of their mechanisms or genetic basis, making the process inefficient and often producing drugs that have less than optimal profiles. By understanding the nature of the body's genetic blueprint and the genetic basis of disease, gene-targeted drugs can be designed to prevent or treat the disease at the genetic level rather than to treat the symptoms.

One of the greatest challenges resulting from the genomics revolution is devising ways to effectively convert genes into drugs. Currently, recombinant proteins are administered by injection and must be given frequently. This often leads to poor patient compliance, especially in children and the elderly. Blood concentrations of therapeutic proteins may stabilize at levels that are too low to be effective. Conversely, if blood concentrations of proteins are too high, they may cause toxicity. In many cases, these problems may prevent development of an otherwise promising therapeutic protein or severely limit the doses that can be tolerated.

In gene therapy, the gene encoding a therapeutic protein is administered to the patient by injection, resulting in protein production by cells in the body. Genes can be administered to any convenient tissue, because the engineered cells will then secrete proteins into the bloodstream for delivery to target cells and tissues. We believe that gene therapy has great potential as a general

means of delivering therapeutic proteins, a major class of pharmaceutical products that encompasses natural hormones, engineered proteins and humanized monoclonal antibodies. The number of available therapeutic proteins will climb rapidly as the human genome project is completed, resulting in numerous new gene-therapy opportunities. We believe that optimal gene therapies must provide physicians with the ability to control the activity of therapeutic genes.

Without gene regulation, gene therapy has similar disadvantages as recombinant protein therapy such as blood levels that may be too high or too low. In addition, most diseases are heterogeneous and dynamic in nature, which means that physicians need to be able to adjust dosing of therapeutic proteins, whether administered by gene therapy or recombinant proteins, as the disease evolves and the effective therapeutic range varies. Finally, we believe that if gene therapies cannot be withdrawn or turned off, they may not be accepted by physicians and regulatory authorities. As a result, the ability to carefully control the activity of genes *in vivo*, and to turn them off when needed, will be critical to making gene therapies safe, effective and broadly applied.

OUR SOLUTION

Three of the key problems that need to be addressed in order to capitalize on the opportunities presented by the genomics revolution are understanding:

- * which genes and proteins are critically involved in disease;
- * how to convert these genes into drugs; and
- * how to intervene selectively in disease pathways.

Our core competencies in functional genomics, protein engineering and structure-based drug design enable us to address these key problems. Functional genomics allows us to identify genes, proteins and signaling pathways that are involved in disease states and to validate them as points of therapeutic intervention. Protein engineering allows us to modify the structure and function of proteins so that they can be utilized optimally in our research and product candidates. Structure-based drug design allows us to determine the three-dimensional structure of a protein target, providing a detailed guide to chemists as they design small-molecule drug candidates. We have two primary programs, regulated gene therapy and signal transduction inhibitors, which directly capitalize on our core competencies.

Our proprietary gene regulation technologies, referred to as ARGENT and RAPID, provide alternatives to conventional approaches to gene therapy, where a gene is introduced into the body with no way to turn it off or to modulate its level of activity. Using small-molecule drugs, ARGENT and RAPID-based gene therapies function analogously to a volume control of a radio, allowing genes and proteins to be precisely controlled. This enables a physician to maintain protein levels within desired therapeutic ranges.

Our signal transduction inhibitor program capitalizes on the discovery of signaling proteins encoded by genes, including those identified through the human genome project. We can pinpoint particular proteins or signaling pathways that are critically involved in disease and can focus our drug discovery efforts on targets that we believe are most likely to lead to potent inhibitors of the disease process. Structure-based drug design provides an atomic blueprint of the interaction of our drugs with their molecular targets, which helps define their mechanism of

inhibition. We believe that this will increase the likelihood of clinical benefit to patients with chronic diseases, while minimizing the likelihood of adverse effects.

Our enabling platform technologies have led to 12 product candidates in various stages of research and development. We have retained the rights to all of our product candidates and enabling technologies. They are covered by 96 patents and patent applications, including 29 that have already issued or have allowed claims in the United States. Seven patents on our ARGENT system have been issued. Our platform technologies can be leveraged further by developing additional products with corporate partners.

We believe that we are well-positioned to exploit the opportunities presented in the genomic era of drug discovery because of our:

- * core competencies in genomics, protein engineering and structure-based drug design;
- * enabling platform technologies, including our ARGENT and RAPID systems;
- * diverse product candidates, the most advanced of which is a regulated gene therapy product preparing for Phase 2 clinical trials; and
- * intellectual property position.

OUR BUSINESS STRATEGY

Our objective is to become a leading biopharmaceutical company that discovers, develops, and commercializes proprietary platform technologies and therapeutic products based on gene regulation and signal transduction.

The key elements of our business strategy to achieve our objective are as follows:

- * Develop and commercialize small-molecule drugs targeting gene regulation and signal transduction. We focus our research and development efforts on small-molecule drugs. The major advantages of small-molecule drugs are their potential for oral administration and their suitability for treating chronic diseases. In addition, these drugs can be manufactured by conventional synthetic or fermentation methods, generally resulting in lower manufacturing costs than for therapeutic proteins. Our core competencies position us well to pursue the development and commercialization of small-molecule drugs.
- * Pursue programs with multiple product opportunities. Our enabling platform technologies and core competencies create multiple product opportunities for us to address significant unmet medical needs. We intend to penetrate these markets by taking advantage of the knowledge and intellectual property developed in our product development programs.
- * Provide our enabling platform technologies to academic investigators in exchange for intellectual property and commercial rights. We currently have over 275 academic investigators throughout the world using our platform technologies, including ARGENT and RAPID, for research in genomics and protein function, or proteomics. As part of our agreements with the academic institutions, we receive

specified intellectual property and commercial rights to discoveries made by the investigators using our technologies.

- * License our enabling platform technologies to biotechnology and pharmaceutical companies for research and manufacturing. We plan to generate revenues by licensing our enabling platform technologies, including ARGENT and RAPID, to pharmaceutical and biotechnology companies for their internal genomics and proteomics research and protein manufacturing.
- * Retain defined commercialization rights to our product candidates. We intend to maximize the commercial return on our product candidates and technologies by selectively pursuing advanced clinical development. We plan to retain the commercialization rights to some of our product candidates in North America and to develop a focused sales force to market these products to specialty physicians and specialized treatment centers. We also plan to establish corporate collaborations or joint ventures to market and distribute our products outside of North America. For products that require long-term clinical trials or extensive marketing to achieve product acceptance, we intend to enter into collaborations on a worldwide basis.
- * Access therapeutic genes and vectors, as needed, through licensing and corporate partnerships. Our enabling technologies can be applied to the treatment or prevention of a wide range of diseases in addition to those that we have targeted. In instances when we need access to proprietary therapeutic genes, we intend to establish partnerships with major pharmaceutical and biotechnology companies that have the rights to those genes. Our strategy for obtaining access to vectors is to form partnerships with academic institutions and/or gene therapy companies that are developing appropriate vector technology for particular product applications. We are currently in discussions with several entities to obtain rights to the vector technologies we need for our product development programs. Agreements relating to our access to vectors and genes would allow us to leverage our technologies into markets that we cannot enter on our own.

THE SCIENTIFIC BASIS OF OUR TECHNOLOGIES

Our programs leverage our detailed knowledge of how cells convert extracellular signals into specific cellular responses. The process by which an external signal is transmitted into and within a cell to elicit a response is referred to as signal transduction. Signal transduction is generally initiated by the interaction of extracellular factors with receptors on the cell surface. These extracellular signals are conveyed, or transduced, to the inner face of the cell membrane, causing the intracellular portion of the receptor to interact with specific contact sites, known as domains, on signaling proteins. The initial intracellular interactions of receptors and their targets stimulate a series of additional protein interactions that disseminate the signal throughout the cell, thereby producing a specific cellular response.

Signal transduction pathways often lead to activation of specific genes in the cell nucleus. Activation of a gene results in its being read by cellular machinery, leading to manufacture of the corresponding protein. The process of reading an activated gene is referred to as gene transcription. Transcription of specific genes is a key point of regulation for many signal transduction pathways, which leads to production of specific proteins. Like signal transduction,

the process of transcription also takes place through a series of interactions between proteins, which results in the step-wise assembly of proteins called transcription factors.

Once the protein encoded by a specific gene has been manufactured, it either stays inside the cell or is exported out of the cell, depending on the type of protein. The process of exporting a protein out of a cell is referred to as protein secretion. Proteins that are exported out of the cell include those that perform extracellular functions, such as communication with other cells. Examples of secreted proteins include hormones, cytokines, and growth factors.

OUR CORE COMPETENCIES

All of our drug discovery efforts are based on the integration of three core competencies: functional genomics, protein engineering and structure-based drug design. We have assembled in-depth capabilities in each of these areas and believe that we are recognized as a leader in the application of state-of-the-art chemical, structural and biological approaches to the efficient design of small-molecule drugs.

Functional genomics

Functional genomics encompasses bioinformatics, molecular and cellular biology, and molecular genetics. We have developed critical technologies in each of these areas, including proprietary software tools for gene sequence analysis, gene expression analysis technologies, and high-throughput screens for gene function. In addition to their uses in regulated gene therapy, our ARGENT and RAPID platform technologies are versatile research tools to analyze the function of genes and proteins.

We deploy functional genomics approaches in both of our major programs. In our regulated gene therapy program, we seek to identify novel secreted proteins that have the potential to be delivered using our ARGENT and RAPID orally active protein therapy systems. In our signal transduction inhibitor program, we use genomics strategies to identify proteins and pathways that are involved in disease states and to validate them as drug targets. By focusing our drug discovery efforts on validated targets, we believe that we can increase the likelihood that our small-molecule drugs will be specific and effective. Validated drug targets that are present on the outside of cells also can serve as starting points for the development of inhibitory monoclonal antibodies which could be delivered using ARGENT orally active protein therapy.

Protein engineering

The process of redesigning proteins is known as protein engineering and involves a combination of recombinant DNA techniques, biochemistry, and structural and computational analysis of proteins. In each of our drug discovery programs, we rely heavily on the ability to design new proteins with desired function and binding characteristics. Our ARGENT and RAPID systems are dependent upon the use of engineered proteins. Using our core competency in protein engineering, we modify the structure of the proteins that bind to our small-molecule drugs allowing them to regulate gene expression. In our signal transduction inhibitor program, we have redesigned proteins to make them more amenable to structural analysis.

Structure-based drug design

Determining the three-dimensional structure of a protein target provides a detailed guide to chemists as they design small-molecule drug candidates using medicinal chemistry or combinatorial approaches. After identifying the initial structure, repeated cycles of compound synthesis, testing and further structural analysis are conducted. This allows the design of compounds or libraries of compounds to be quickly refined based on detailed knowledge of their mechanism of binding. This approach, known as structure-based drug design, accelerates the process of designing and optimizing small-molecule drugs with high potency and specificity and optimal pharmacological properties.

We focus on the development and use of computational chemistry tools for analyzing compound binding, which facilitates our optimization of product candidates. We also use proprietary computer modeling techniques, known as virtual screening, to analyze the predicted potency of compounds without having to make and test them. This process can make drug discovery and lead optimization more efficient by focusing our efforts on the most promising series of compounds.

Each of our product development programs has been guided and accelerated by structure-based approaches. In our regulated gene therapy program, we have high-resolution structures of our gene-targeted drugs bound to their protein targets. In our signal transduction inhibitor program, high-resolution structures of our compounds bound to validated protein targets have been determined routinely and are used to guide drug optimization.

REGULATED GENE THERAPY PROGRAM

Gene Therapy Overview

Gene therapy involves the genetic modification of cells so that they produce specific therapeutic proteins. Cells are modified either *ex vivo*, meaning outside the body, or *in vivo*, meaning inside the body, using gene transfer vehicles called vectors. Gene therapy is commonly viewed as a means of replacing defective genes in patients suffering from genetic diseases. However, we believe that the potential of gene therapy extends beyond these applications. Cells can be modified *ex vivo* to improve their therapeutic properties, such as by enhancing the ability of bone marrow transplants to recognize and eliminate cancer cells or engineered *in vivo* to manufacture specific therapeutic proteins.

Overview of Our Regulated Gene Therapy Program

Our gene regulation technologies can be applied to three distinct cellular processes: signal transduction, gene transcription and protein secretion. Our ARGENT system has distinct applications in regulating signal transduction and gene transcription. In ARGENT signal transduction products, gene activity is turned on and off with a small-molecule drug. In ARGENT gene transcription products, the effects of genes are regulated incrementally over a sustained period of time within a therapeutic range. In RAPID protein secretion products, the release of proteins from a cell is regulated in a pulse-like manner within a therapeutic range. Furthermore, our ARGENT and RAPID products have been designed to function when delivered using any vector system.

Small-molecule Drugs to Regulate Genes

We have developed a series of technologies that allow the expression of genes or the activities of gene products, or proteins, to be controlled using small-molecule drugs. In order to control the activity of therapeutic genes or their products using a drug, the processes of signal transduction and/or gene transcription need to be brought under small-molecule control. These processes proceed in large part through a series of specific interactions between proteins, known as dimerization. At the core of our ARGENT gene regulation systems is the concept of inducing these protein interactions with small-molecule drugs, as shown in the figure below. In the November 1993 issue of Science, Drs. Stuart Schreiber and Gerald Crabtree, members of our Board of Scientific and Medical Advisors, reported that small-molecule drugs, which we call Dimerizer Drugs, can be used to control cellular responses in cells or whole organisms. Through our subsidiary, ARIAD Gene Therapeutics, Inc., or AGTI, we have exclusively licensed this technology from Stanford University and Harvard University.

ACTIVATING SIGNAL TRANSDUCTION USING SMALL-MOLECULE DIMERIZER DRUGS

[PICTURE]

Validation of ARGENT and RAPID for Genomics Research

We have established a web-based academic technology transfer program, whereby our proprietary ARGENT gene regulation systems are made available to academic scientists worldwide for research purposes. Since October 1996, we have provided research kits to over 275 academic investigators for the regulated dimerization of proteins and transcription of genes. We receive intellectual property and commercial rights to inventions and discoveries made using our technologies. We believe that broad distribution of our reagents, coupled with retention of patent and commercial rights, is an effective way to maximize the value of our broadly applicable technology. In particular, since the ARGENT system has special utility in genomics and proteomics research, we may receive rights to new therapeutic genes and proteins for use in our regulated gene therapy products. We recently expanded our academic technology transfer program to include our proprietary gene activation technology and RAPID technology. Kits based on these two systems are being distributed under the same terms as the ARGENT kits.

REGULATED GENE THERAPY: SIGNAL TRANSDUCTION

ARGENT Graft-versus-Host Disease Cell Therapy

We have designed a specific Dimerizer Drug for use in our ARGENT cell therapy applications. Apoptosis, or programmed cell death, is the natural cellular suicide mechanism, whereby cells die in a controlled and predetermined manner. Several signal transduction pathways that lead to cell death are initiated by clustering of certain proteins at the cell membrane. We have demonstrated that apoptosis can be artificially stimulated in cells by clustering of an engineered cell-death protein using a Dimerizer Drug. This system, therefore, provides a drug-inducible system for controlled elimination of genetically engineered white blood cells, or T cells.

We have optimized the ARGENT apoptosis system for clinical development. The intracellular cell-death protein has been linked to an extracellular marker protein, allowing cells that express the construct to be obtained in pure form, which is a prerequisite for clinical use in cell therapy. These results were published in November 1999 in Human Gene Therapy. Our scientists, in collaboration with Dr. Claudio Bordignon's group of the Instituto Scientifico H.S. Raffaele, Milan, have demonstrated the ability of our system to eliminate human T cells in a controlled manner.

We completed a Phase 1 clinical trial of AP1903, our gene-targeted drug which is the product of structure-based drug design, in healthy volunteers to assess the safety and tolerability of the drug. No drug-related adverse effects were seen at any of the doses tested. Even at the lowest dose tested, AP1903 blood levels were at or above the concentration predicted to effectively kill T cells based on our preclinical studies.

We are planning a Phase 2 trial of our ARGENT graft-versus-host disease product candidate in patients with relapsed chronic myeloid leukemia undergoing allogeneic bone marrow transplantation. Graft-versus-host disease, or GvHD, is an often lethal condition that arises when donor T cells attack healthy host tissues. The trial will be conducted at the Fred Hutchinson Cancer Research Center, Seattle. In this trial, T cells will be isolated from the patient and retrovirally transduced with a cell death gene. The marked T cells will then be isolated and infused into the patient. AP1903 will be administered to eliminate the disease-causing donor T cells only if GvHD is observed.

ARGENT Stem Cell Gene Therapy

Regulated receptor dimerization also can be used to achieve the opposite cellular outcome to apoptosis: drug-stimulated growth of cells. Most growth factors that elicit proliferation and development of mammalian cells operate through clustering their cell surface receptors. This means that these processes also can be stimulated within engineered cells using a Dimerizer Drug by replacing the cell-death protein with a receptor that signals growth.

This application of our ARGENT system is the basis for development of regulated stem cell therapies, including the growth of organs or tissues for transplantation. A key limitation of stem cell gene therapy is the very low efficiency of gene transfer into stem cells. This inefficiency makes it difficult to obtain sufficient numbers of stem cells, and therefore their progeny, that contain therapeutic or corrective genes. Incorporating the ARGENT growth regulation system into stem cells provides a simple, controlled way to stimulate the growth of

rare transduced cells, either in vitro or in vivo. We believe that these approaches may lead to innovative new cell therapy products to treat a wide range of otherwise intractable genetic and acquired diseases.

To address the limitations of stem cell therapy, we are pursuing the use of our ARGENT system in the development of regulated stem cell gene therapy product candidates. Our collaborator, Dr. C. Anthony Blau, published findings of a study in 1998 in the Proceedings of the National Academy of Sciences USA in which mouse bone marrow cells were stimulated to grow in a dose-dependent manner using our ARGENT growth system. Dr. Blau later reported that our small-molecule Dimerizer Drug, AP1903, regulated the growth of stem cells derived from human umbilical cord blood. In vivo experiments are now underway to control the growth of stem cells using ARGENT.

REGULATED GENE THERAPY: GENE TRANSCRIPTION (ARGENT) AND PROTEIN SECRETION
(RAPID)

We believe that our proprietary technologies, ARGENT regulated transcription and RAPID regulated protein secretion, complement each other and together provide a complete portfolio of technologies for producing proteins using gene therapy and controlling their production with orally active small-molecule drugs. The following figure shows the process by which patients may be treated with our orally active protein therapy product candidates. This process includes one-time or infrequent injection of a vector and repeated administration of our small-molecule drugs.

ARGENT AND RAPID ORALLY ACTIVE PROTEIN THERAPY PRODUCT CANDIDATES

[PICTURE]

ARGENT Orally Active Protein Therapy

Our ARGENT orally active protein therapy system is designed to control the first stage of gene expression, which is the transcriptional reading of the gene. Our system provides control of the activity of gene transcription through the administration of a proprietary, orally active Dimerizer Drug. We have developed multiple classes of Dimerizer Drugs for clinical use in our ARGENT product candidates, and they are currently undergoing preclinical testing in animal models prior to selection of a clinical candidate. Importantly, all of the proteins used to build the ARGENT regulatory components are human in origin, which we believe should make an unwanted immune response unlikely.

The ARGENT system can be delivered using any vector. In addition, it can be delivered to any tissue that allows the protein to be secreted into the bloodstream. In our initial applications of the ARGENT system, we have focused on adeno-associated virus, or AAV, vectors delivered by injection into muscle. We are currently completing the optimization of the ARGENT components in AAV vectors. We also are conducting additional experiments in mice and rhesus monkeys in anticipation of initiating clinical development of our first ARGENT product candidate.

In a study published in the July 1999 issue of the Proceedings of the National Academy of Sciences USA, our scientists and academic collaborators used AAV-based gene delivery in combination with the ARGENT system to regulate the production of human growth hormone, or hGH, in mice. Over a greater than 300-day period, we were able to repeatedly induce hGH production or to hold it steady at pre-determined levels, simply by varying the dose of the Dimerizer Drug. In the absence of our drug, production of hGH was undetectable, showing the feasibility of terminating therapy when necessary. The following figure shows the published results of this study.

LONG-TERM REGULATED DELIVERY OF HUMAN GROWTH HORMONE IN MICE USING ARGENT

[PICTURE]

We also have demonstrated the use of the ARGENT system to control production of the therapeutic protein, erythropoietin, or Epo, a red blood cell stimulant. In a study published in Science in January 1999, our scientists and academic collaborators used AAV-mediated delivery of the ARGENT system to muscle to regulate Epo production both in mice and primates. The dose-dependent increase in Epo resulted in higher numbers of red blood cells in the bloodstream. Discontinuing drug administration shut down Epo production. After continued observation, several rhesus monkeys have demonstrated regulatable production of Epo for over 450 days following a single administration of vectors.

RAPID ORALLY ACTIVE PROTEIN THERAPY

Many therapeutic proteins require secretion and clearance from the blood much more quickly than is feasible with the ARGENT system. One example is insulin, which must be delivered in brief pulses at mealtimes and in response to or in anticipation of other activities. In order to be able to deliver such proteins using a regulated gene therapy approach, much faster protein production and release is needed. Pulse-like delivery is achieved by regulating the last step of protein production: protein secretion. Our new technology, called RAPID, is based on a proprietary method of storing pre-made proteins inside cells as aggregates or large clusters. Proteins are released almost immediately in fully active form in response to the administration of one of our RAPID drugs, which breaks apart the protein clusters.

Our scientists, along with collaborators from the Memorial Sloan-Kettering Cancer Center and the University of Geneva, published in the February 4, 2000 issue of Science that insulin and hGH could be delivered in pulse-like bursts in response to our RAPID drug. The level of protein secretion depended on the dose of the drug. In addition, we showed that the level of baseline protein production in the absence of drug could be controlled by appropriate design of the RAPID system. This may allow us to mimic low-level production of insulin between mealtimes. We demonstrated the use of the RAPID system to transiently correct blood sugar levels in diabetic mice. Within fifteen minutes of adding our RAPID drug, insulin appeared in the blood stream and rose to peak levels within less than two hours. Levels of insulin and glucose then returned over the next two hours to baseline levels. Based on these preclinical data, we are pursuing the development of a RAPID regulated insulin product for the treatment of insulin-dependent diabetes.

OTHER ARGENT APPLICATIONS

We have identified several additional uses of our gene regulation technologies, including product opportunities and manufacturing applications.

Dimerizer Hormone Mimetics

The receptors that are activated in the ARGENT GvHD and regulated stem cell gene therapy products are cell surface proteins that have been genetically modified to respond to a Dimerizer Drug. Our regulated gene therapy program is focused on Dimerizer Drugs that target such engineered proteins. However, the concept of small molecules that promote protein clustering, known as dimerization, also encompasses molecules that crosslink naturally occurring proteins. Dimerizer Drugs that target and directly activate endogenous receptors represent another promising class of therapeutic agents. Examples include receptors that bind Epo and human growth hormone. Dimerizer Drugs that can specifically crosslink and activate individual receptors, or Dimerizer Hormone Mimetics, would have compelling competitive advantages over the currently administered recombinant proteins.

Gene Activation Technology

The level of protein produced by cells containing the ARGENT system depends on the activation potency of our transcription factors. We have improved the activation components of such transcription factors, known as gene activator proteins. We have several classes of gene activator proteins that are substantially more potent than previously described versions. In

addition, we have devised a novel and proprietary way to enhance the potency of such activators further by bundling a group of gene activator proteins together, instead of relying on an individual molecule. This new approach allows genes to be activated under conditions which are normally resistant to activation.

More potent activation of gene transcription allows higher levels of protein to be produced when using ARGENT, expanding the range of proteins that can be delivered using our technology. Gene activation is a fundamental step in a wide variety of commercially important applications, including the control of gene activity for the purposes of genomic analysis, the activation of endogenous genes in cells, either in vitro or in vivo, and large-scale manufacturing of recombinant proteins in cell culture.

SIGNAL TRANSDUCTION INHIBITOR PROGRAM

Overview

Signal transduction is fundamental to numerous cellular processes, including controlling cell growth and development. Disruption or overstimulation of signaling pathways is implicated in many disease states. We are using our detailed knowledge of the structure of intracellular proteins to develop orally active small-molecule drugs which turn off specific signal transduction pathways that lead to disease. This contrasts with our regulated gene therapy program, where our small-molecule drugs turn on specific cellular processes.

Signaling from cell surface receptors is now known to proceed through a series of regulated interactions between proteins which usually lead to activation of specific genes and cellular responses. We have targeted well-defined domains of these interacting proteins to design drugs. By designing a drug that binds to the interaction site of a protein, subsequent interactions between proteins can be prevented, interrupting the signaling cascade. If the signaling pathway is critically involved in disease, this should result in a beneficial therapeutic effect. The following figure describes the process of inhibiting a signal transduction pathway with a small-molecule drug.

NORMAL SIGNAL TRANSDUCTION

[PICTURE]

SIGNAL PATHWAY INHIBITED

[PICTURE]

Drug Discovery Process

Our signal transduction inhibitor program identifies and optimizes small-molecule drugs using our integrated genomics and structure-based drug design platform. Our drug discovery

efforts target several important types of signaling domains, including binding sites and enzymes. These domains are found in multiple signaling proteins that are critical to particular disease processes. While these classes of domains share common structural attributes overall, we believe that their differences enable the design of specific inhibitory compounds. We anticipate that the knowledge gained in designing one inhibitor will be applicable to the design of other inhibitors for other disease applications. This ability to leverage knowledge of target structure and small-molecule drug design should result in a more efficient drug discovery process.

We are currently focusing our signal transduction inhibitor program on intracellular pathways critically involved in three areas: osteoporosis, immunosuppression, and inflammatory disorders.

Osteoporosis-- Src Signal Transduction Inhibitors

Extensive genomics studies have validated the signaling protein, Src tyrosine kinase, as a critical target in osteoporosis. Knockout of this protein in mice, so that the mice no longer have functional Src, results in mice that suffer from osteopetrosis, a condition characterized by excessive bone formation that is the opposite of osteoporosis. However, the mice are otherwise normal. Studies of bone cells from knockout mice have shown that Src appears essential for bone breakdown. We believe that these functional genomics studies indicate that a small-molecule inhibitor of Src may be an effective treatment for osteoporosis.

Using structure-based drug design, we have identified multiple classes of selective small-molecule compounds that block the Src tyrosine kinase and inhibit Src cellular activities and bone breakdown. These compounds have been shown to be effective in ex vivo and in vivo animal models representative of the osteoporosis disease process. We are conducting comparative in vivo with the aim of selecting a clinical candidate for development.

Immune-related Diseases-- ZAP Signal Transduction Inhibitors

A critical step in the human immune response is the activation of T cells, which starts when specific antigens bind to T cells, activating a signaling pathway that leads to a full-scale immune response. A variety of functional genomics approaches have validated that a signaling protein called ZAP is a critical component of the T cell activation pathway. Patients with severe immunodeficiency have been identified that have a genetic defect in ZAP. Together, we believe that this functional genomics research indicates that a small-molecule drug that selectively blocks ZAP may represent an effective immunosuppressive agent with minimal side effects.

We have benefited extensively from structural knowledge of the ZAP protein in our drug discovery efforts. Using our molecular structure of ZAP, as well as the knowledge gained in the Src osteoporosis program, we have identified multiple classes of lead molecules that bind to ZAP and inhibit the interaction of the ZAP protein with the T cell receptor. We are evaluating these compounds using in vitro assays to select the most promising compounds for in vivo testing in models of immune-related disease and for further optimization.

Inflammation-- NF-(kappa)B Signal Transduction Inhibitors

Inflammation involves the recruitment of white blood cells from the blood to damaged or infected tissue. Inflammatory molecules function by binding to specific receptors on leukocytes that then activate signal transduction pathways, many of which converge on a single transcription

factor, called NF-(kappa)B. This protein regulates a wide range of genes that are directly implicated in the inflammatory response. We believe that small molecules which prevent the activation of NF-(kappa)B may be potent and selective inhibitors of inflammation.

We have identified the NF-(kappa)B transcription factor and proteins in the signaling pathways that converge on NF-(kappa)B as excellent targets for our small-molecule drug discovery program. Appropriate screens and assays have been developed for generating non-peptide inhibitors of NF-(kappa)B activation. We believe that we have a particularly strong intellectual property position in this program based on an exclusive license we obtained to inventions made by Dr. David Baltimore, a member of our Board of Scientific and Medical Advisors, relating to the discovery of this pathway in 1985.

PRODUCT DEVELOPMENT

We have 12 product candidates in various stages of research and development, including one preparing to enter Phase 2 clinical trials, two in preclinical development and nine in earlier-stage research, which are listed below. Some of the components of our gene therapy product candidates may be covered by third-party intellectual property. We may elect to modify the focus of our research-stage programs based on new genomics discoveries and/or corporate partnerships that we may form.

PRODUCT CANDIDATE -----	DISEASE TARGETS -----	TECHNOLOGY -----	STATUS -----
REGULATED GENE THERAPY			
Regulated GvHD cell therapy	Graft-versus-host disease in cancer patients undergoing allogeneic bone marrow transplantation	ARGENT	Preparing for phase 2 trials
Regulated Epo	Anemia	ARGENT	Preclinical development
Regulated hGH	Growth hormone deficiency	ARGENT and RAPID	Research
Regulated sTNFR and IL-1RA	Rheumatoid arthritis; osteoarthritis; other inflammatory disorders	ARGENT and RAPID	Research
Regulated Factors VIII and IX	Hemophilia A and B	ARGENT and RAPID	Research
Regulated insulin	Insulin-dependent diabetes	RAPID	Research
Regulated endorphins	Management of chronic pain	RAPID	Research
Regulated stem cell therapy	Cancer; Organ and tissue transplantation; Multiple other diseases	ARGENT	Research
OTHER ARGENT APPLICATIONS			
Dimerizer Hormone Mimetics	Anemia; Cancer; Multiple other diseases	Small-molecule drugs based on ARGENT	Research
SIGNAL TRANSDUCTION INHIBITORS			
Src inhibitor	Osteoporosis	Signal Transduction Inhibition	Preclinical development
ZAP inhibitor	Autoimmune diseases; Organ transplantation	Signal Transduction Inhibition	Lead optimization
NF-(kappa)B pathway inhibitors	Inflammatory diseases; Arthritis; Asthma	Signal Transduction Inhibition	Research

TARGET MARKETS FOR OUR REGULATED GENE THERAPY PRODUCT CANDIDATES

ARGENT GvHD Cell Therapy

Approximately 40,000 bone marrow transplants, or BMTs, are performed each year worldwide as a therapy for various neoplastic disorders, in particular, certain types of leukemias and other hematologic malignancies. However, a severe complication, called GvHD, limits expansion in the number of patients who may benefit from allogeneic BMTs. Current treatments reduce or eliminate T cells prior to transplantation or broadly immunosuppress patients, but these approaches also remove the powerful therapeutic benefit contributed by the T cells, such as their ability to attack the underlying cancer cells and support engraftment of the transplanted marrow.

The market for a product which eliminates GvHD-related morbidity and mortality without adversely affecting the cancer relapse rate is currently estimated to be at least \$240 million worldwide. An effective treatment for GvHD is expected to increase by several fold the number of allogeneic BMTs performed each year, allowing transplants from mismatched unrelated donors and expanding the applicability of BMTs to solid tumors such as colon cancer.

Regulated Erythropoietin

Anemia is a blood disorder that results in a deficiency of red blood cells and hemoglobin. Acquired anemia is most commonly caused by renal failure, AIDS, cancer or chemotherapy. The current standard of care for acquired anemia is treatment with recombinant Epo administered by injection two or three times a week. The current worldwide market for this product exceeds \$3 billion annually.

We believe that a considerable market exists for an Epo product that does not require frequent injections. In addition, current market and pricing considerations suggest that some patients, particularly those with inherited disorders, could benefit from higher doses of recombinant Epo than currently used. We believe that a regulated Epo gene therapy product would allow delivery of higher, more effective doses of Epo to these patients and may have competitive advantages over current products. We also believe that gene regulation may be required to bring a gene therapy Epo product to market, due to the substantial safety concerns that would be associated with clinical use of an unregulated gene therapy product.

Regulated Insulin

Type 1 insulin-dependent diabetes typically results from autoimmune destruction of beta cells in the pancreas. Approximately two million people in North America and Western Europe have type 1 diabetes. These individuals generally require multiple daily insulin injections and careful attention to diet and exercise. Type 2 insulin-independent diabetics have not traditionally been candidates for insulin therapy. However, new orally active drugs that act to increase insulin sensitivity in these patients are now allowing an increasing proportion of type 2 diabetics to benefit from insulin injections. As a result, the number of patients currently receiving multiple daily insulin injections in North America and Europe is estimated at 5.2 million. There is, therefore, a large potential market for products that can improve the efficacy of treatment and

quality of life of diabetic patients. Long-term studies also have shown that tight control of blood sugar levels decreases the morbidity and mortality associated with diabetes, highlighting the potential value and convenience of our pulse-like orally active protein therapy.

Regulated Human Growth Hormone

Human growth hormone is approved for the treatment of growth hormone deficiency in children and adults, growth failure associated with chronic renal insufficiency prior to kidney transplantation, and short stature. Worldwide annual sales exceed \$1 billion. Currently, patients receive recombinant protein by injection, but this mode of administration does not reproduce the natural pattern of human growth hormone production in the body, which is a daily pulsing peaking during the night. In mouse models, we have demonstrated that both the ARGENT and RAPID systems can be used to stimulate human growth hormone production in a manner that better approximates natural hormone release.

Regulated Soluble TNF Receptor and Interleukin-1 Receptor Antagonist

Soluble TNF receptor, or sTNFR, and interleukin-1 receptor antagonist, or IL-1RA, are naturally occurring proteins with anti-inflammatory activities by virtue of their ability to bind and block inflammation-causing proteins. They have broad potential utility in treatment of diverse inflammatory diseases, such as rheumatoid arthritis and inflammatory bowel disease. A sTNFR product comprising a fusion of the TNF receptor to a portion of an antibody is approved for the treatment of rheumatoid arthritis and currently has annual sales exceeding \$350 million. An anti-TNF monoclonal antibody is approved for the treatment of Crohn's Disease. We believe that the ARGENT and RAPID platforms are well suited for delivery of these proteins using gene therapy approaches, as second-generation products, delivered either locally to joints or systemically for chronic prophylaxis. The RAPID system may be particularly appropriate for delivery of the proteins in response to inflammatory flare-ups. We have demonstrated regulated sTNFR production using the ARGENT system.

Regulated Coagulation Factors VIII and IX

Hemophilias A and B are genetic diseases characterized by a deficiency of the blood proteins Factor VIII and Factor IX, respectively. Inadequate blood levels of these proteins leads to the inability to form blood clots and results in multiple serious medical complications. Current treatments involve repeated injection of the proteins, but they are not particularly effective in preventing the associated bone and joint damage. The annual worldwide cost of treating hemophilias is estimated to exceed \$3 billion. Factor IX, and to a lesser extent Factor VIII, have been early targets for clinical gene therapy trials, because modest blood levels of protein would be sufficient to provide therapeutic effects. We believe that regulation of Factor VIII and Factor IX gene therapy with ARGENT or RAPID may enhance their therapeutic performance and safety.

Regulated Endorphin

Many diseases or injuries lead to long-term, unremitting pain. Current treatments for chronic pain generally fall short of therapeutic goals, often involving invasive surgical procedures or regimens with adverse effects. Therefore, we believe that a substantial market exists for effective therapies to treat chronic pain with more favorable risk/benefit ratios. There is considerable interest in using gene therapy to alleviate chronic pain with endorphins. Studies

have shown that gene therapy vectors expressing these proteins can be administered in animal models of chronic pain, decreasing pain sensitivity of these animals. We are pursuing development of a product candidate for regulated delivery of beta-endorphin using our RAPID orally active protein therapy system. We believe that the ability to deliver modest, constant basal levels of beta-endorphin, together with the ability to stimulate rapid bursts of higher protein production in response to pain flare-ups, would be a key advance in pain treatment.

TARGET MARKETS FOR OUR SIGNAL TRANSDUCTION INHIBITORS

Src Signal Transduction Inhibitor

Osteoporosis is characterized by progressive loss of bone architecture and mineralization leading to the loss of bone strength and an increased fracture rate. A prolonged imbalance of bone resorption over formation can occur in post-menopausal women, as well as in men and women with certain disorders such as renal osteodystrophy, hypercalcemia and Paget's disease. This imbalance leads to weaker bone structure and a higher risk of fractures. The estimated cost of treatment and care for osteoporosis and related fractures exceeds \$10 billion per year in the United States alone. Current therapies for osteoporosis include calcitonin, estrogen replacement therapy, selective estrogen receptor modulators, and bisphosphonates. Both calcitonin and estrogen replacement attempt to maintain bone mass by decreasing the rate at which bone is naturally resorbed by the body. Bisphosphonates are a more recent form of therapy for osteoporosis. While these compounds appear to perform better than calcitonin and estrogen replacement therapy in some patients, they have adverse effects that limit patient compliance and acceptance.

ZAP Signal Transduction Inhibitor

Organ transplant rejection and autoimmune disorders, such as rheumatoid arthritis, multiple sclerosis and inflammatory bowel disease, are caused by unwanted reactions by the human immune system. Treatment of these diseases requires a class of drug known as immunosuppressives. A substantial market exists for novel small-molecule immunosuppressive drugs that can overcome the limitations of current therapies. Sales of immunosuppressives for solid organ transplantation alone exceed \$1 billion per year. We believe that a ZAP signal transduction inhibitor should have a better safety profile than existing therapies because it will not have the known mechanism based toxicities of marketed drugs, such as tacrolimus and cyclosporine.

NF-(kappa)B Signal Transduction Pathway Inhibitor

Inflammation is an important defense mechanism against injury, but white blood cells recruited to sites of damage can lead to a variety of inflammatory conditions, such as arthritis and asthma. In 1998, worldwide sales of non-steroidal anti-inflammatory drugs exceeded \$6 billion. With the recent availability of new anti-inflammatory drugs that target COX-2, or receptors relating to the action of aspirin, we expect the total market to grow substantially. Inflammatory messengers trigger several signal transduction pathways which leads to the chronic symptoms and pain associated with inflammatory diseases. We are developing orally active anti-inflammatory drugs that target critical steps in the NF-(kappa)B pathway that ultimately leads to activation of inflammatory response genes.

In 1995, we began to collaborate with Hoechst Marion Roussel (France) on the discovery and development of drugs to treat osteoporosis and related bone diseases. This program was focused on the development of Src inhibitors. In 1997, we established the Hoechst-ARIAD Genomics Center, LLC with Aventis Pharmaceuticals Inc., formerly known as Hoechst Marion Roussel, Inc., to pursue functional genomics based upon state-of-the-art technologies and molecular and cellular genetics and bioinformatics to analyze human genes and identify those genes that encode novel therapeutic proteins or targets for small-molecule drug discovery. In a transaction completed on December 31, 1999, we restructured both of these agreements and received \$40 million in cash, the return of 3,004,436 shares of our series B convertible preferred stock, forgiveness of \$1.8 million of long-term debt held by Aventis, all drug candidates and related technologies resulting from our osteoporosis collaboration, and the right to use certain genomics and bioinformatics technologies developed in the Genomics Center. As of March 16, 2000, we received a total of \$116 million from Aventis, including \$31.5 million of equity and debt which was returned to us as part of the restructuring of these agreements. Hoechst Marion Roussel (France) will receive certain payments related to approval and commercial sales of Src inhibitors.

In 1997, through our subsidiary, AGTI, we entered into a joint venture agreement for the collaborative research and development of certain gene therapy technologies with Genovo, Inc. In February 2000, we terminated our agreement with Genovo to pursue alternative commercial opportunities. Genovo has no rights to any of our proprietary technologies or product candidates.

In the future, we intend to commercialize our products independently and through collaborations with biopharmaceutical and pharmaceutical partners.

OUR BOARD OF SCIENTIFIC AND MEDICAL ADVISORS

We have assembled a Board of Scientific and Medical Advisors, or the Advisory Board, that currently consists of experts in the fields of molecular and cellular biology, biochemistry, immunology, and organic, physical, and computational chemistry, and molecular medicine. On an individual basis, members of the Advisory Board advise us on scientific matters relating to our programs, including the selection of molecular targets, drug discovery strategies, clinical applications of proposed products and new technological developments. Each advisor is engaged under a consulting agreement that requires the advisor to provide consulting services to us in our field of interest and not to disclose any of our confidential information. Our Board of Scientific and Medical Advisors is chaired by Stuart L. Schreiber, Ph.D., Morris Loeb Professor of Chemistry, Co-Director, Institute of Chemistry and Cell Biology and Scientific Co-Director, Center of Genomics Research at Harvard University and Investigator of the Howard Hughes Medical Institute.

OUR LICENSES

We and our subsidiary, AGTI, have entered into license agreements with various research institutions and universities pursuant to which we and/or AGTI are the licensee of certain technologies upon which some of our product candidates are based. A partial summary of certain of these licenses is presented below.

LICENSOR	LICENSEE	TECHNOLOGY AREA	PROGRAM
Stanford University and Harvard University	AGTI	Regulating cellular processes with small-molecule drugs	Regulated Gene Therapy (ARGENT)
Massachusetts Institute of Technology	AGTI	Engineered DNA-binding proteins	Regulated Gene Therapy (ARGENT)
Harvard University	AGTI	Synthetic gene activators	Regulated Gene Therapy (ARGENT)
Mochida Pharmaceuticals, Ltd.	ARIAD	Fas cell-death gene	Regulated Gene Therapy (ARGENT)
University of Pennsylvania	ARIAD and AGTI	Muscle-directed gene therapy	Regulated Gene Therapy (ARGENT)
Cornell Research Foundation, Inc.	ARIAD	Three-dimensional structure of drug-binding domain	Regulated Gene Therapy (ARGENT)
Mt. Sinai Hospital, affiliate of University of Toronto	ARIAD	Src-related signaling domains for drug discovery	Signal Transduction Inhibitors (Src and ZAP)
Massachusetts Institute of Technology, Whitehead Institute, and Harvard University	ARIAD	NF-(kappa)B pathway for drug discovery	Signal Transduction Inhibitors (NF-(kappa)B)
Stanford University	ARIAD	NF-AT pathway for drug discovery	Signal Transduction Inhibitors

All of the licenses are exclusive except those with Mochida Pharmaceuticals and the University of Pennsylvania. We have agreed to pay royalties to our licensors on sales of certain products based on the licensed technologies, as well as, in some instances, milestone payments and patent filing and prosecution costs. The licenses also impose various milestone, commercialization, sublicensing, royalty as well as insurance and other obligations. Failure by us to comply with these requirements could result in the termination of the applicable agreement which could have a material adverse effect on our business, financial condition and results of operations.

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.

Overall, we have 96 patents and patent applications in the United States. Of those, we own 48 (including four issued patents and two applications with allowed claims), co-own two applications with the University of Pennsylvania, and have exclusive licenses from several universities to the remainder (including 15 issued patents and 31 pending patent applications, seven of which already have allowed claims). Approximately one third of this patent portfolio is held by AGTI and an additional one quarter of the portfolio is licensed to AGTI. In addition, we have recently been assigned seven patent applications covering small-molecule Src inhibitors developed as part of our collaboration with Hoechst Marion Roussel (France). We also have secured an exclusive option on an additional United States patent application and have several nonexclusive technology licenses from certain institutions in support of our research programs. We anticipate that we will continue to seek licenses from universities and others where

applicable technology complements our research and development efforts. We have filed patent applications in foreign countries as well, as appropriate.

The majority of the patents and patent applications in our portfolio cover our technology platforms: gene regulation and gene activation. These patents and pending applications cover regulatory technologies, specialized variants of the technologies, critical nucleic acid components, small-molecule drugs, the identification and use of dimerizer hormone mimetics, and various uses of the technologies in health care and drug discovery. Patents issued to date include seven broad patents covering the ARGENT system. These patents issued beginning in November 1998 and should provide proprietary support for commercialization of our gene therapy product candidates until at least 2015. Broad support should be further enhanced and extended by additional patents we hope to obtain in the ensuing years, including patents based on pending applications.

Our patent portfolio also covers research tools and methods used in our drug discovery programs, as well as multiple classes of small-molecule compounds discovered in that program. Our patent portfolio contains a number of issued patents and pending applications relating to the NF-(kappa)B and NF-AT signal transduction pathways, and, in particular, to their use in drug discovery.

We also rely on unpatented trade secrets and proprietary know-how. However, trade secrets are difficult to protect. We enter into confidentiality agreements with our employees, consultants and collaborators. In addition, we believe that certain technologies utilized in our research and development programs are in the public domain. Accordingly, we do not believe that patent or other protection is available for these technologies. If a third party were to obtain patent or other proprietary protection for any of these technologies, we may be required to challenge such protections, obtain a license for such technologies or terminate or modify our programs that rely on such technologies.

COMPETITION

The field of gene-based drug discovery is new and rapidly evolving, and we expect that it will continue to undergo significant technological change. We anticipate that we will experience intense competition from other companies in the gene therapy and genomics fields and those that are developing small-molecule drugs that target signal transduction pathways. We are aware of many early stage and established companies, including major pharmaceutical and biotechnology firms, that are pursuing the development of gene-based drugs or are actively engaged in gene therapy.

In the gene therapy field, these include Avigen, Inc., Cell Genesys, Inc., Genzyme Corp., Novartis Pharma AG, Targeted Genetics Corp., TransGene S.A., Transkaryotic Therapies, Inc. and Valentis, Inc. However, to the best of our knowledge, none of these companies has advanced programs in regulated gene therapy, and none has started clinical development of regulated gene therapy products. We are aware of several companies that are developing specific products to treat GvHD, including Abgenix, Inc., BioTransplant, Inc., Chiron Corp., Protein Design Labs, Inc. and Repligen Corp. 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 which may materially and adversely affect us.

In the area of signal transduction inhibitors, companies such as BioCryst, Inc., Ligand Pharmaceuticals, Inc., Novartis Pharma AG, Tularik, Inc., and Vertex Pharmaceuticals, Inc. are developing drugs to treat human disease by regulating genes and inhibiting signal transduction pathways. Further, many pharmaceutical companies have programs in these areas.

COMMERCIALIZATION AND MANUFACTURING

Because of the broad potential applications of our platform technologies, we intend to develop and commercialize products both on our own and through corporate partners. We plan to market products in North America to specialty physicians and specialized treatment centers. When advantageous, we intend to rely on strategic partners for manufacturing and marketing our products. We believe our small-molecule drugs can be produced in commercial quantities through conventional synthetic and natural product fermentation techniques. We expect to access manufacturing methods for viral and/or non-viral vectors from potential partners and licensors. Our ability to obtain these vectors in amounts sufficient to conduct clinical trials of our gene therapy product candidates and to commercialize such products may affect our commercial success. We expect to manufacture, package, label, and distribute our product candidates on our own in some cases and to establish arrangements with third parties to perform some or all of these functions in other cases.

GOVERNMENT REGULATION

The manufacturing and marketing of our products, if any, and our ongoing research and development activities are subject to extensive regulation by numerous governmental authorities in the United States and other countries. Any drug developed by us must undergo rigorous preclinical studies and clinical testing and an extensive regulatory approval process implemented by the FDA under the federal Food, Drug and Cosmetic Act prior to marketing in the United States. Satisfaction of such regulatory requirements, which includes demonstrating that the product is both safe and effective for 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. Preclinical studies must be conducted in conformance with the FDA's good laboratory practice regulations. Before commencing clinical trials in the United States, we must submit to and receive clearance from the FDA of an Investigational New Drug Application, or IND. There can be no assurance that submission of an IND would result in FDA clearance to commence clinical trials. Clinical testing must meet requirements for institutional review board oversight, informed consent and good clinical practice and is subject to continuing FDA oversight. We have a limited history of conducting preclinical studies and the clinical trials necessary to obtain regulatory approval. Furthermore, we or the FDA may suspend clinical trials at any time if either party believes that the subjects participating in such trials are being exposed to unacceptable risks or if the FDA finds deficiencies in the conduct of the trials.

Before receiving FDA approval to market a product, we will have to demonstrate that the product is safe and effective in the patient population that will be treated. Data obtained from preclinical studies and clinical trials are susceptible to varying interpretations which could delay, limit or prevent regulatory clearances. In addition, delays or rejections may be encountered based upon additional government regulation from future legislation or administrative action or changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. Similar delays also may be encountered in foreign countries. There can be no assurance that even after such time and expenditures, regulatory approval will be obtained for any products developed by us, or, even if approval is obtained, the labeling for such products will

not be required to contain limitations with respect to its condition of use, which could materially impact the marketability and profitability of the product. If regulatory approval of a product is granted, such approval will be limited to those disease states and conditions for which the product has been shown useful, as demonstrated by clinical trials. Furthermore, approval may entail ongoing requirements for postmarketing studies. Even if such regulatory approval is obtained, a marketed product, its manufacturer and its manufacturing facilities and procedures are subject to continual review and periodic inspections by the FDA. Discovery of previously unknown problems with a product, manufacturer manufacturing procedures or facility may result in restrictions on such product or manufacturer, including costly recalls, an injunction against continued manufacturing until the problems have been adequately addressed to the FDA's satisfaction or even withdrawal of the product from the market. There can be no assurance that any compound developed by us alone or in conjunction with others will prove to be safe and efficacious in clinical trials and will meet all of the applicable regulatory requirements needed to receive and maintain marketing approval. Additionally, the marketing, labeling and advertising for an approved product is subject to ongoing FDA scrutiny and the failure to adhere to applicable requirements can result in regulatory action which could have a material impact on the profitability of the product.

Outside the United States, our ability to market a product will be contingent upon receiving a marketing authorization from the appropriate regulatory authorities. The requirements governing the conduct of clinical trials, marketing authorization, pricing and reimbursement vary widely from country to country. At present, foreign marketing authorizations are applied for at a national level, although within the European Community certain registration procedures are available to companies wishing to market a product in more than one member state. If the regulatory authority is satisfied that adequate evidence of safety, quality and efficacy has been presented, a marketing authorization will be granted. This foreign regulatory approval process includes all of the risks associated with FDA clearance set forth above.

OUR EMPLOYEES

As of March 16, 2000, we had 56 full-time employees, 34 of whom hold post-graduate degrees, including 19 with a Ph.D. or M.D. Most of our employees are engaged directly in research and development. We have entered into confidentiality and noncompetition agreements with all of our employees. None of our employees are covered by a collective bargaining agreement, and we consider relations with our employees to be good.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Statements in this Annual Report on Form 10-K under the captions "Business" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as oral statements that may be made by the Company or by officers, directors or employees of the Company acting on the Company's behalf, that are not historical fact constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause the actual results of the Company to be materially different from the historical results or from any results expressed or implied by such forward-looking statements. Such factors include, among others, the following factors:

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 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 THERAPY PRODUCT CANDIDATES.

We may not be able to access the vector technologies required to develop and commercialize our gene 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 many of our potential products are based on gene therapy, our inability to access gene transfer technology would have significant adverse effects on a large proportion 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 from our inception in 1991 through 1998 and have an accumulated deficit of approximately \$75 million from our operations through December 31, 1999, after taking into account a one-time gain of approximately \$46 million on the sale on December 31, 1999 of our 50% interest in the Hoechst-ARIAD Genomics Center. 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, including expenses related to the Hoechst-ARIAD Genomics Center.

INSUFFICIENT FUNDING MAY JEOPARDIZE OUR RESEARCH AND DEVELOPMENT PROGRAMS AND MAY PREVENT COMMERCIALIZATION OF OUR PRODUCTS AND TECHNOLOGIES, PARTICULARLY IF WE DO NOT ENTER INTO ANY ADDITIONAL COLLABORATIVE RESEARCH AGREEMENTS.

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 which is required to maintain and continue each of our research and development programs at their current levels. 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., 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 therapy product development program. Minority stockholders, including Harvard University, Stanford University and certain former members of our management, currently own approximately 6% of the issued and outstanding capital stock of AGTI. Current members of our senior management and our Advisory Board also have the ability to acquire, through the exercise of outstanding stock options, an additional 16% of AGTI's capital stock. 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 OUR MANAGEMENT BENEFICIALLY OWNS A SIGNIFICANT PERCENTAGE OF THE CAPITAL STOCK OF OUR SUBSIDIARY, AGTI, THERE MAY BE CONFLICTS OF INTEREST PRESENT IN DEALINGS BETWEEN ARIAD AND AGTI.

Five members of our senior management team have the right to acquire up to 7.7% of the outstanding capital stock of AGTI. The same members of our management beneficially own 10.5% 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. Any such perception could cause the market price of our common stock to decline.

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, M.D., our Senior Vice President and Chief Scientific Officer, Manfred Wiegele, Ph.D., and our Senior Vice President, Drug Development, John D. Iuliucci, Ph.D., and other key officers and members of our scientific staff responsible for areas such as clinical development, drug discovery, cell biology and genetics, 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,
- * developing gene therapy products, 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 and RAPID 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 regulated gene therapy program. 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 recent death 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 recently 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. The FDA has halted all clinical trials of gene therapy at the University of Pennsylvania, and U.S. Senate hearings have been held to examine the broader questions of the safety and ethics of gene therapy. 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 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 therapy product candidates may require more extensive clinical studies than anticipated, which could delay commercialization of our gene 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 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 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.

ITEM 2. PROPERTIES

We have leased approximately 100,000 square feet (approximately 40,000 square feet currently under sublease to third parties) of laboratory and office space at 26 Landsdowne Street, located in University Park at M.I.T., in Cambridge, Massachusetts. The lease is for a ten-year term ending in July of 2002, with two consecutive five-year renewal options. We believe that our currently leased facility will, in large part, be adequate for our research and development activities at least through the year 2002.

ITEM 3. LEGAL PROCEEDINGS

We were named as a defendant in a purported class action lawsuit commenced in June 1995 in the U.S. District Court for the Southern District of New York. The action named as defendants us; the underwriter of our initial public offering and a market maker in our common stock, D. Blech & Co.; the managing director and sole shareholder of D. Blech & Co. and our former director, David Blech; certain of our directors and the qualified independent underwriter for our initial public offering, Shoenberg Hieber, Inc.

Plaintiff alleged, among other things, that our registration statement for our initial public offering was false and misleading; that Blech & Co. and David Blech participated in purported sham sales of our securities after the offering in an alleged attempt to artificially inflate the sales prices of our common stock; and that all of the defendants knew, or should have known, of this alleged scheme and are liable for failing to disclose the alleged scheme to the investing public. There were no allegations asserting specific acts of participation or wrongdoing by us. Plaintiff alleged that the foregoing constituted violations of Sections 11 and 12(2) of the Securities Act of 1933, Section 10(b) and Rule 10b-5 under the Securities Exchange Act of 1934 and common law fraud, and sought unspecified damages, costs and attorneys' fees.

We filed a motion to dismiss, which was denied in June 1996. In late 1998, the parties stipulated to, and the Court approved, the certification of a class of persons who purchased our securities from the time of our initial public offering on May 20, 1994 through and including September 21, 1994.

In December 1999, we reached an agreement in principle with the plaintiff to settle the matter. The parties have yet to enter into a formal settlement agreement, which if, and when, executed will have to be submitted to the Court for approval. There can be no assurance that the settlement agreement will be signed and, if signed, if, and when, the Court will approve the settlement. We believe, however, based on discussions leading to the agreement in principle, that such settlement will not have a material adverse effect on our financial position or results of operations.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1999.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

MARKET INFORMATION

Our common stock has been traded on the Nasdaq National Market under the symbol "ARIA" since September 19, 1994. The following table sets forth the high and low sales prices of our common stock as quoted on the Nasdaq National Market for the periods indicated.

1998:	HIGH	LOW
	-----	-----
First Quarter	\$ 5 1/2	\$ 3 1/2
Second Quarter	5 1/16	3
Third Quarter	4 1/4	1 7/8
Fourth Quarter	2 7/8	1 3/8
1999:		
First Quarter	\$ 4 1/4	\$ 1 5/16
Second Quarter	1 29/32	1 1/4
Third Quarter	1 3/8	23/32
Fourth Quarter	3	1/2

HOLDERS

The approximate number of holders of record of our common stock as of March 16, 2000 was 450, and the approximate total number of holders of our common stock as of March 16, 2000, was 34,000.

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 current long-term debt agreement prohibits the payment of cash dividends. (See "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources" and Note 5 of "Notes to Consolidated Financial Statements.")

ITEM 6. SELECTED FINANCIAL DATA

The selected financial data set forth below as of December 31, 1999, 1998, 1997, 1996 and 1995 and for the years then ended have been derived from the audited consolidated financial statements of the Company, certain of which are included elsewhere in this Annual Report on Form 10-K, and are qualified by reference to such financial statements. 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.

YEAR ENDED DECEMBER 31,

CONSOLIDATED STATEMENTS OF OPERATIONS DATA:	1999	1998	1997	1996	1995
Revenue:					
Research revenue (principally related parties)	\$ 12,467,920	\$ 12,143,192	\$ 9,233,708	\$ 10,304,332	\$ 2,102,222
Interest income	444,748	998,743	1,757,327	1,271,895	1,360,225
Total revenue	12,912,668	13,141,935	10,991,035	11,576,227	3,462,447
Operating expenses:					
Research and development	28,844,388	35,515,270	20,286,945	15,253,874	13,675,025
General and administrative	3,938,246	2,633,923	2,924,972	2,229,273	2,281,247
Interest expense	521,437	480,627	410,072	269,131	323,124
Total operating expenses	33,304,071	38,629,820	23,621,989	17,752,278	16,279,396
Gain on sale of Genomics Center	46,440,178				
Equity in net loss of Genomics Center	(1,492,309)	(660,295)			
Income (loss) before cumulative effect of change in accounting principle	24,556,466	(26,148,180)	(12,630,954)	(6,176,051)	(12,816,949)
Cumulative effect of change in accounting Principle	(364,388)				
Net income (loss)	24,192,078	(26,148,180)	(12,630,954)	(6,176,051)	(12,816,949)
Repurchase and accretion costs attributable to redeemable convertible preferred stock	(6,434,799)	(35,616)			
Net income (loss) attributable to Common stockholders	\$ 17,757,279	\$ (26,183,796)	\$ (12,630,954)	\$ (6,176,051)	\$ (12,816,949)

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

You should read the following discussion and analysis in conjunction with "Selected Consolidated Financial Data" and our consolidated financial statements and the related notes included elsewhere in this prospectus.

OVERVIEW

We are a biopharmaceutical company focused on the discovery, development and commercialization of proprietary platform technologies and therapeutic products based on gene regulation and signal transduction. Our core competencies in functional genomics, protein engineering and structure-based drug design allow us to capitalize on the wealth of genetic information being generated by government, academic and commercial laboratories. We apply this expertise to the development of proprietary technology platforms that allow manipulation of signal transduction, gene transcription, and protein secretion events using small-molecule drugs. We believe that our ability to control the activity of genes and proteins allows us to broadly apply discoveries in genomics to the development of innovative therapeutic products.

AVENTIS RELATIONSHIP

From November 1995 through December 1999, substantially all of our research revenue and the majority of our research expenses were incurred in collaboration or in partnership with Aventis Pharmaceuticals Inc., formerly known as Hoechst Marion Roussel, Inc., and its affiliates.

In November 1995, we entered into an agreement with Hoechst Marion Roussel, S.A. to collaborate on the discovery and development of drugs to treat osteoporosis and related bone diseases, one of our signal transduction inhibitor programs. In March 1997, we entered into an agreement, which established a 50/50 joint venture, called the Hoechst-ARIAD Genomics Center, LLC, or the Genomics Center, with Aventis to pursue functional genomics with the goal of identifying genes that encode novel therapeutic proteins and small-molecule drug targets. We recognized aggregate revenue under these agreements of \$12,468,000 in 1999, \$11,729,000 in 1998 and \$8,690,000 in 1997.

On December 31, 1999, we completed the sale of our 50% interest in the Genomics Center to Aventis and received \$40,000,000 in cash, 3,004,436 shares of our series B preferred stock, the forgiveness of \$1,857,000 of long-term debt we owed to Aventis, drug candidates and related technologies resulting from the 1995 Osteoporosis Agreement and the right to use certain genomics and bioinformatics technologies developed by the Genomics Center. We recorded a net gain on the sale of \$46,440,000. As a result of this sale, the revenue generated in our relationship with Aventis will not recur, and we expect to realize a reduction of revenue in fiscal 2000 of at least \$12,468,000, which will be offset by an expected reduction in research and development expenses associated with the Genomics Center of approximately \$16,700,000.

GENERAL

Since our inception in 1991, we have devoted substantially all of our resources to our research and development programs. We receive no revenue from the sale of pharmaceutical products, and substantially all revenue to date has been received in connection with our relationship with Aventis. Except for the gain on the sale of the Genomics Center in December 1999, which resulted in net income for fiscal 1999, we have not been profitable since inception. We expect to incur substantial and increasing operating losses for the foreseeable future,

primarily due to the expansion of our research and development programs and manufacturing and clinical development. We expect that losses will fluctuate from quarter to quarter and that these fluctuations may be substantial. As of December 31, 1999, we had an accumulated deficit of \$74,883,000, after including a one-time gain of \$46,440,000 on the sale of our 50% interest in the Genomics Center on December 31, 1999.

RESULTS OF OPERATIONS

YEARS ENDED DECEMBER 31, 1999, 1998 AND 1997

REVENUE

We recognized research revenue under our services agreements, collaborative research arrangements and government-sponsored grants of \$12,468,000, \$12,143,000 and \$9,234,000 for the years ended December 31, 1999, 1998 and 1997, respectively. The increase of \$325,000 or 2.7% in 1999 compared to 1998 was due to an increase of \$1,517,000 in research revenue recognized under our services agreements with the Genomics Center and the achievement of the second milestone of \$2,000,000 under the 1995 HMR Osteoporosis Agreement, partially offset by a reduction of \$3,078,000 in the amortization of deferred revenue recognized in the prior year relating to the 1995 Osteoporosis Agreement and a decrease of \$114,000 in government-sponsored research grant revenue recognized in the prior year. The increase of \$2,909,000 or 31.5% in 1998 compared to 1997 was due to an increase of \$3,594,000 in research revenue recognized under our services agreements with the Genomics Center, partially offset by a \$685,000 decrease in research revenue recognized under the 1995 HMR Osteoporosis Agreement and government-sponsored research grants. We expect research revenue to decrease over the next year resulting from the termination of our services agreement with the Genomics Center and the termination of the 1995 Osteoporosis Agreement as a result of the sale of our 50% ownership interest in the Genomics Center. As of January 1, 2000, we have no research arrangements or government-sponsored grants that will generate revenue in 2000.

Interest income was \$445,000, \$999,000 and \$1,757,000 for the years ended December 31, 1999, 1998 and 1997, respectively. Interest income decreased by \$554,000 in 1999 compared to 1998 as a result of a lower level of funds invested and a realized loss on the sale of marketable securities of \$70,000 recorded in 1999. Interest income decreased by \$758,000 in 1998 compared to 1997 as a result of a lower level of invested funds.

OPERATING EXPENSES

Research and development expenses were \$28,844,000, \$35,515,000 and \$20,287,000 for the years ended December 31, 1999, 1998 and 1997, respectively. Research and development expenses decreased by \$6,671,000 or 18.8% due primarily to decreased manufacturing development and other preclinical development costs incurred in 1998, partially offset by increased research services provided to the Genomics Center under our services agreements in 1999. Research and development expenses increased by \$15,228,000 or 75.1% in 1998 compared to 1997 primarily due to increases in research services provided to the Genomics Center under our services agreements and increased product development costs for our regulated gene therapy product candidates, including manufacturing, process development and other preclinical development activities in preparation for clinical trials of AP1903 that commenced in December 1998. AP1903 is the small-molecule drug used in our GvHD cell therapy product

candidate. We expect our research and development expenses to decrease over the next year as a result of the sale of our 50% ownership interest in the Genomics Center.

General and administrative expenses were \$3,938,000, \$2,634,000 and \$2,925,000 for the years ended December 31, 1999, 1998 and 1997, respectively. General and administrative expenses increased by \$1,304,000 or 49.5% in 1999 compared to 1998 primarily due to increased professional and legal services incurred in connection with litigation, as well as a proposed private placement offering that was not undertaken. General and administrative expenses decreased by \$291,000 or 9.9% in 1998 compared to 1997 primarily due to nonrecurrence in 1998 of administrative expenses incurred in connection with the formation of the Genomics Center in 1997.

We incurred interest expense of \$521,000 in 1999 compared to \$481,000 in 1998 and \$410,000 in 1997. The increase of \$40,000 in 1999 compared to 1998 was due to the amortization of financing costs relating to the issuance of series C preferred stock in 1998, offset by a reduction in the level of debt outstanding. The increase of \$71,000 in 1998 compared to 1997 was due to the issuance of debt at the end of the second quarter in 1997.

ACCOUNTING CHANGE

We adopted Statement of Position, or SOP 98-5, Reporting the Cost of Start-Up Activities, effective January 1, 1999 and recorded a charge of \$364,000 as a cumulative effect of change in accounting principle.

OPERATING RESULTS

We reported income before cumulative effect of change in accounting principle of \$24,556,000 in 1999 and incurred losses of \$26,148,000 in 1998 and \$12,631,000 in 1997. After such cumulative effect, we reported net income of \$24,192,000 for 1999. Our results for 1999 include a gain on the sale of our 50% interest in the Genomics Center of \$46,440,000. We expect that substantial operating losses will be reported for several more years, but are expected to decrease over the next year as a result of the sale of our interest in the Genomics Center. However, operating losses are expected to subsequently increase as our product development activities expand and will fluctuate as a result of differences in the timing and composition of revenue earned and expenses incurred. On December 31, 1999 and January 14, 2000, we repurchased and retired all of our series C preferred stock and recorded a charge of \$6,185,000 in 1999 representing the premium paid on the repurchase, which has been deducted from net income in determining net income attributable to common stockholders. Accretion costs attributable to the series C preferred stock of \$250,000 and \$36,000 were also recognized in 1999 and 1998, respectively. We reported net income attributable to common stockholders of \$17,757,000 in 1999 or \$.80 per share (basic) and \$.70 per share (diluted). We reported net losses attributable to common stockholders of \$26,184,000 in 1998 and \$12,631,000 in 1997 or \$1.25 and \$.66 per share (basic), respectively. At December 31, 1999, we had available for federal tax reporting purposes and net operating loss carry forwards of approximately \$67,400,000 that expire commencing in 2006. We also had federal research and development tax credit carryovers of approximately \$5,200,000 that expire commencing in 2006. The utilization of both the net operating loss carry forwards and tax credits is subject to certain limitations under federal tax laws.

LIQUIDITY AND CAPITAL RESOURCES

We have financed our operations and investments primarily through the private placement and public offering of our securities, including the sale of series C preferred stock to investors and the sale of series B preferred stock to Aventis Pharmaceuticals Inc., supplemented by the issuance of long-term debt, operating and capital lease transactions, interest income, government-sponsored research grants, research revenue under the 1995 Osteoporosis Agreement, research revenue under the terms of our services agreements with the Genomics Center, and, in December 1999, the sale to Aventis of our 50% interest in the Genomics Center.

At December 31, 1999, we had cash and cash equivalents totaling \$28,320,000, exclusive of \$6,925,000 of cash, subsequently expended on January 14, 2000, to repurchase the remaining series C preferred stock, and working capital of \$22,730,000 compared to cash, cash equivalents and marketable securities totaling \$14,176,000 and working capital of \$5,806,000 at December 31, 1998.

The primary uses of cash during the year ended December 31, 1999 were \$21,724,000 to finance our operations and working capital requirements, \$677,000 to purchase laboratory equipment, \$2,056,000 to repay long-term debt, \$10,325,000 for the repurchase and retirement of series C preferred stock and \$710,000 to acquire intellectual property.

The primary sources of funds during the year ended December 31, 1999 were:

- * \$6,468,000 of research revenue from Aventis under our services agreements,
- * \$6,000,000 of research funding from the 1995 Osteoporosis Agreement, including \$2,000,000 received upon the achievement of the second research milestone under this agreement,
- * \$1,699,000 from the net return of investment in the Genomics Center,
- * \$309,000 from the sale/leaseback of laboratory equipment,
- * \$7,805,000 of proceeds from the sale and maturity of marketable securities,
- * \$5,747,000 from the sale of series B preferred stock to Aventis,
- * \$1,801,000 of borrowings from Aventis, and
- * \$40,000,000 from the sale of our 50% ownership interest in the Genomics Center to Aventis.

We have substantial fixed commitments under various research and licensing agreements, consulting and employment agreements, lease agreements and long-term debt instruments. These fixed commitments currently aggregate in excess of \$4,600,000 per year and may increase. We will require substantial additional funding for our research and development programs, including preclinical development and clinical trials, for operating expenses, for the pursuit of regulatory clearances and for establishing manufacturing, marketing and sales capabilities. Adequate funds for these purposes, whether obtained through financial markets or collaborative or other arrangements with collaborative partners, or from other sources, may not be available when needed or on terms acceptable to us.

We have issued 2,125,225 publicly traded warrants, each of which entitles its holder to purchase one share of our common stock at an exercise price of \$8.40 per share. The warrants expire on December 30, 2000. As of March 16, 2000, 70,389 warrants have been exercised for

an aggregate exercise price of \$591,000, and 2,054,836 warrants remain outstanding. If all of the remaining outstanding warrants are exercised, we would receive proceeds of \$17,261,000. On March 27, 2000, we issued a call notice for the redemption of the warrants. If the market price of our common stock continues to trade at a per share price above the exercise price of the warrants, which is \$8.40 per share, the warrants are likely to be exercised, and we would receive the proceeds from the exercise.

We believe that our available funds will be adequate to satisfy our capital and operating requirements at least through 2001. However, there can be no assurance that changes in our research and development plans or other events affecting our revenues or operating expenses will not result in the earlier depletion of our funds.

IMPACT OF THE YEAR 2000 ISSUE

The year 2000 issue relates to numerous potential problems arising from the way that some computer software misinterprets dates after December 31, 1999, which could result in a computer system failure or miscalculations causing disruptions of operations. We believe that the year 2000 issue has been successfully addressed through our year 2000 compliance plan. The total cost for upgrading our computer systems, hardware and software was less than \$200,000. We did not experience any difficulties related to the year 2000 issue on January 1, 2000, and have not experienced any material difficulties to date. We will continue to monitor our computer systems for potential difficulties through the remainder of the calendar year 2000.

NEW ACCOUNTING PRONOUNCEMENT

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards, or SFAS, No. 133, Accounting for Derivative Instruments and Hedging Activities, effective for fiscal years beginning after June 15, 2000. The new standard requires that all companies record derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. Our management is currently assessing the impact of SFAS No. 133, as amended, on our consolidated financial statements. We will adopt this accounting standard on January 1, 2001, as required.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We maintain an investment portfolio 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 securities, generally with maturities of 90 days or less. Our marketable securities generally consist of corporate debt and U.S. Government securities primarily with maturities of one year or less, but generally less than six months. These securities are classified as available-for-sale. Available-for-sale securities are recorded on the balance sheet at fair market value with unrealized gains or losses reported as a separate component of stockholders' equity (accumulated other comprehensive loss). Gains and losses on investment security transactions are reported on the specific-identification method. Interest income is recognized when earned. A decline in the

market value of any available-for-sale security below cost that is deemed other than temporary results in a charge to earnings and establishes a new cost basis for the security. These investments are sensitive to interest rate risk. We believe that the effect, if any, of reasonable possible near-term changes in the interest rates on its financial position, results of operations and cash flows would not be material due to the short-term nature of these investments.

At December 31, 1999, we have a bank term note at prime plus 1%. This note is sensitive to interest rate risk. In the event of a hypothetical 10% increase in the prime rate (90 basis points), we would incur approximately \$26,000 of additional interest expense per year.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders of
ARIAD Pharmaceuticals, Inc.:

We have audited the accompanying consolidated balance sheets of ARIAD Pharmaceuticals, Inc. and its subsidiaries (the "Company") as of December 31, 1999 and 1998, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 1999. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. 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 its subsidiaries as of December 31, 1999 and 1998, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1999, in conformity with generally accepted accounting principles.

As discussed in Note 1 to the financial statements, in 1999 the Company changed its method of accounting for start-up activities.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 4, 2000

ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

		ASSETS	
		DECEMBER 31,	
Current assets:	NOTES	1999	1998
Cash and cash equivalents	1	\$ 28,319,870	\$ 6,501,648
Marketable securities	1,2		7,674,488
Inventory and other current assets	1	1,608,695	2,018,846
Due from Genomics Center	1,4		332,571
Total current assets		29,928,565	16,527,553
Property and equipment:	1,5,6		
Leasehold improvements		12,566,650	12,555,301
Equipment and furniture		4,413,453	4,438,399
Total		16,980,103	16,993,700
Less accumulated depreciation and amortization		13,645,750	8,944,027
Property and equipment, net		3,334,353	8,049,673
Investment in Genomics Center	1,4		1,902,129
Intangible and other assets, net	1,6	10,973,095	4,306,585
Total		\$ 44,236,013	\$ 30,785,940
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Current portion of long-term debt	5	\$ 1,200,000	\$ 1,861,021
Accounts payable		2,276,447	3,322,439
Accrued liabilities		3,695,972	2,042,641
Advance from Genomics Center	4	25,707	3,162,463
Deferred revenue	1,3		333,333
Total current liabilities		7,198,126	10,721,897
Long-term debt	5	1,900,000	3,295,139
Commitments and contingent liabilities	6,10		
Redeemable convertible preferred stock	7	8,070,415	5,035,616
Stockholders' equity:	4,7,8		
Series B convertible preferred stock, \$.01 par value; authorized, 5,000,000 shares; issued and outstanding, 2,526,316 shares in 1998 (liquidation preference, \$24,000,000)			25,263
Common stock, \$.001 par value; authorized, 60,000,000 shares; issued and outstanding, 22,031,888 shares in 1999 and 21,938,754 shares in 1998		22,032	21,939
Additional paid-in capital		101,928,618	104,360,924
Accumulated other comprehensive loss	2		(34,381)
Accumulated deficit		(74,883,178)	(92,640,457)
Stockholders' equity		27,067,472	11,733,288
Total		\$ 44,236,013	\$ 30,785,940

See notes to consolidated financial statements.

ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

		YEAR ENDED DECEMBER 31,		
		1999	1998	1997
Revenue:		NOTES:		
Research revenue (principally related parties)	1, 3, 4	\$ 12,467,920	\$ 12,143,192	\$ 9,233,708
Interest income	2	444,748	998,743	1,757,327
Total revenue		12,912,668	13,141,935	10,991,035
Operating expenses:				
Research and development	4	28,844,388	35,515,270	20,286,945
General and administrative		3,938,246	2,633,923	2,924,972
Interest expense	5	521,437	480,627	410,072
Total operating expenses		33,304,071	38,629,820	23,621,989
Gain on sale of Genomics Center	4	46,440,178		
Equity in net loss of Genomics Center	1, 4	(1,492,309)	(660,295)	
Income (loss) before cumulative effect of change in accounting principle	1	24,556,466	(26,148,180)	(12,630,954)
Cumulative effect of change in accounting principle		(364,388)		
Net income (loss)		24,192,078	(26,148,180)	(12,630,954)
Repurchase and accretion costs attributable to redeemable convertible preferred stock	7	(6,434,799)	(35,616)	
Net income (loss) attributable to common stockholders		\$ 17,757,279	\$ (26,183,796)	\$ (12,630,954)
Earnings (loss) per share:				
Per common share (basic):				
Income (loss) attributable to common stockholders before cumulative effect of change in accounting principle		\$.82	\$ (1.25)	\$ (.66)
Cumulative effect of change in accounting principle	1	(.02)		
Net income (loss) - basic		\$.80	\$ (1.25)	\$ (.66)
Weighted average number of shares of common stock outstanding - basic		22,004,646	20,966,586	19,252,885
Per common share (diluted):				
Income (loss) before cumulative effect of change in accounting principle	1	\$.71	\$ (1.25)	\$ (.66)
Cumulative effect of change in accounting principle	1	(.01)		
Net income (loss) - diluted		\$.70	\$ (1.25)	\$ (.66)
Weighted average number of shares of common stock outstanding - diluted		34,448,015	20,966,586	19,252,885

See notes to consolidated financial statements.

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

	YEAR ENDED DECEMBER 31,		
	1999	1998	1997
Cash flows from operating activities:			
Net income (loss)	\$ 24,192,078	\$ (26,148,180)	\$ (12,630,954)
Adjustments to reconcile net income (loss) to net cash used in operating activities:			
Depreciation and amortization	3,682,100	3,468,971	2,662,291
Stock-based compensation	86,179	72,612	70,302
Gain on sale of the Genomics Center	(46,440,178)		
Increase (decrease) from:			
Deferred revenue		(3,077,781)	(3,333,332)
Inventory and other	584,510	(1,260,383)	1,810,941
Due from Genomics Center	332,571	(332,571)	
Other assets	72,016	53,380	(154,262)
Accounts payable	(1,045,992)	23,271	2,510,886
Accrued liabilities	(50,287)	(806,712)	2,210,327
Advance from Genomics Center	(3,136,756)	659,542	2,502,921
Net cash used in operating activities	(21,723,759)	(27,347,851)	(4,350,880)
Cash flows from investing activities:			
Proceeds from disposition of investment in Genomics Center	40,000,000		
Acquisitions of marketable securities	(210,736)	(14,845,944)	(24,890,446)
Proceeds from sales and maturities of marketable securities	7,805,425	22,571,606	22,102,315
Investment in Genomics Center	(6,260,924)	(6,237,132)	(2,806,093)
Return of investment in Genomics Center	7,960,230	5,714,587	1,357,377
Investment in property and equipment, net	(676,924)	(1,673,979)	(9,403,738)
Acquisition of intangible and other assets	(709,992)	(758,876)	(2,237,571)
Net cash provided by (used in) investing activities	47,907,079	4,770,262	(15,878,156)

(Continued)

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

	YEAR ENDED DECEMBER 31,		
	1999	1998	1997
Cash flows from financing activities:			
Proceeds from issuance of series B convertible preferred stock	5,747,000		24,000,000
Proceeds from related party long-term debt	1,800,988		
Proceeds from issuance of redeemable convertible preferred stock		5,000,000	
Repurchase of redeemable convertible preferred stock	(10,325,000)		
Proceeds from borrowings			6,000,000
Repayment of borrowings	(2,056,160)	(1,816,642)	(1,775,966)
Proceeds from sale/leaseback of equipment, net	308,753	2,579,506	2,762,189
Proceeds from issuance of common stock, net of issuance costs		9,226,060	
Proceeds from issuance of stock pursuant to stock option and purchase plans	159,321	231,403	194,872
	-----	-----	-----
Net cash (used in) provided by financing activities	(4,365,098)	15,220,327	31,181,095
	-----	-----	-----
Net increase (decrease) in cash and equivalents	21,818,222	(7,357,262)	10,952,059
Cash and equivalents, beginning of year	6,501,648	13,858,910	2,906,851
	-----	-----	-----
Cash and equivalents, end of year	\$ 28,319,870	\$ 6,501,648	\$ 13,858,910
	=====	=====	=====

(Concluded)

See notes to consolidated financial statements.

ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
 CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
 FOR THE YEARS ENDED DECEMBER 31, 1997, 1998 AND 1999

	NOTES	SERIES B CONVERTIBLE PREFERRED STOCK		COMMON SHARES	STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE LOSS
	-----	-----	-----	-----	-----	-----	-----
Balance, January 1, 1997				19,036,723	\$19,037	\$ 70,593,840	\$(102,699)
Issuance of Series B Convertible Preferred Stock	4,7	2,526,316	\$ 25,263			23,974,737	
Exercise of 1992 warrants	7			179,182	179	(179)	
Issuance of shares pursuant to stock option and purchase plans	8			92,700	93	194,779	
Stock-based compensation to consultants	1					70,302	
Comprehensive loss:							
Net loss							
Other comprehensive income - Unrealized gains on marketable securities	1						55,127
	2						
Comprehensive loss							
Balance, December 31, 1997		2,526,316	25,263	19,308,605	19,309	94,833,479	(47,572)
Private placement of common stock	7,8			2,537,500	2,537	9,223,523	
Issuance of shares pursuant to stock option and purchase plans	8			92,649	93	231,310	
Stock-based compensation to consultants	1					72,612	
Accretion of preferred dividends							
Comprehensive loss:							
Net loss							
Other comprehensive income - Unrealized gains on marketable securities	1						13,191
	2						
Comprehensive loss							
Balance, December 31, 1998		2,526,316	25,263	21,938,754	21,939	104,360,924	(34,381)
Issuance of Series B Convertible Preferred Stock	4,7	478,120	4,781			5,742,219	
Issuance of shares pursuant to stock option and purchase plans	8			93,134	93	159,228	

	ACCUMULATED DEFICIT	STOCKHOLDERS' EQUITY
	-----	-----
Balance, January 1, 1997	\$(53,825,707)	\$ 16,684,471
Issuance of Series B Convertible Preferred Stock		24,000,000
Exercise of 1992 warrants		
Issuance of shares pursuant to stock option and purchase plans		194,872
Stock-based compensation to consultants		70,302
Comprehensive loss:		
Net loss	(12,630,954)	(12,630,954)
Other comprehensive income - Unrealized gains on marketable securities		55,127
Comprehensive loss		(12,575,827)
Balance, December 31, 1997	(66,456,661)	28,373,818
Private placement of common stock		9,226,060
Issuance of shares pursuant to stock option and purchase plans		231,403
Stock-based compensation to consultants		72,612
Accretion of preferred dividends	(35,616)	(35,616)
Comprehensive loss:		
Net loss	(26,148,180)	(26,148,180)
Other comprehensive income - Unrealized gains on marketable securities		13,191
Comprehensive loss		(26,134,989)
Balance, December 31, 1998	(92,640,457)	11,733,288
Issuance of Series B Convertible Preferred Stock		5,747,000

Issuance of shares pursuant to stock
option and purchase plans

159,321

47

Stock-based compensation to consultants	1				86,179		
Repurchase and accretion costs attributable to Series C preferred stock	1,7						
Redemption on sale of Genomics Center	4,7	3,004,436	(30,044)		(8,419,932)		
Comprehensive income (loss):							
Net income							
Other comprehensive income - Unrealized gains on marketable securities	1					34,381	
2							
Comprehensive income							
Balance, December 31, 1999		0	\$ 0	22,031,888	\$22,032	\$101,928,618	\$ 0

Stock-based compensation to consultants			86,179
Repurchase and accretion costs attributable to Series C preferred stock	(6,434,799)	(6,434,799)	
Redemption on sale of Genomics Center		(8,449,976)	
Comprehensive income (loss):			
Net income	24,192,078	24,192,078	
Other comprehensive income - Unrealized gains on marketable securities			34,381
Comprehensive income			24,226,459
Balance, December 31, 1999	\$ (74,883,178)	\$ 27,067,472	

See notes to consolidated financial statements.

ARIAD PHARMACEUTICALS, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

ARIAD Pharmaceuticals, Inc. ("ARIAD" or the "Company") is a biopharmaceutical company focused on the discovery, development and commercialization of proprietary platform technologies and therapeutic products based on gene regulation and signal transduction. Our core competencies in functional genomics, protein engineering and structure-based drug design allow us to capitalize on the wealth of genetic information being generated by government, academic and commercial laboratories. We apply this expertise to the development of proprietary technology platforms that allow manipulation of signal transduction, gene transcription, and protein secretion events using small-molecule drugs. We believe that our ability to control the activity of genes and proteins allows us to broadly apply discoveries in genomics to the development of innovative therapeutic products.

Principles of Consolidation

The consolidated financial statements include the accounts of ARIAD Pharmaceuticals, Inc., its wholly owned subsidiary, ARIAD Corporation, and its 94%-owned subsidiary (78% on a fully diluted basis), ARIAD Gene Therapeutics, Inc. ("AGTI") (Note 8). Intercompany accounts and transactions have been eliminated.

Fair Value of Financial Instruments

The carrying amounts of cash, cash equivalents, accounts payable and accrued liabilities approximate fair value because of their short-term nature. Marketable securities are recorded in the consolidated financial statements at aggregate fair value (Note 2). The carrying amounts of the Company's debt instruments approximate fair value due to the variable interest rate (Note 5).

Accounting Estimates

The preparation of the consolidated financial statements in conformity with generally accepted accounting principles 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 Treasury and Agency securities and high-grade domestic corporate securities, purchased with remaining maturities of 90 days or less.

Marketable Securities

The Company has classified its marketable securities as "available-for-sale" and, accordingly, carries such securities at aggregate fair value. Fair value has been determined based on quoted market prices, in a dealer market, at the closing bid for each individual security held.

Inventory

Inventories are carried at cost using the first-in, first-out method and are charged to research and development expense when consumed. Inventory consists of bulk pharmaceutical material to be used for multiple preclinical and clinical drug development programs and amounted to \$1,182,000 and \$1,446,000 at December 31, 1999 and 1998, respectively.

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). Assets acquired under capital lease obligations are stated at the lower of the present value of the minimum lease payments or the fair market value at the inception of the lease. Assets recorded under capital leases and leasehold improvements are amortized over the shorter of their useful lives or lease term using the straight-line method (4 to 10 years).

The Company accounts for the impairment of long-lived assets in accordance with the provisions of Statement of Financial Accounting Standards ("SFAS") No. 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of.

Investment in Genomics Center

The Company accounted for its investment in the Genomics Center using the equity method through December 31, 1999 (Note 4). Intercompany transactions were eliminated to the extent of the Company's interest (50%) in the Genomics Center (Note 4).

Intangible and Other Assets

Intangible and other assets consist primarily of purchased patents, patent applications, and deposits. The balance at December 31, 1999 also includes \$6,925,000 of cash, subsequently expended on January 14, 2000 to repurchase Series C Preferred Stock (Note 7).

The cost of purchased patents and patent applications and costs incurred in filing for patents are capitalized. Capitalized costs related to patent applications are expensed when it becomes determinable that such applications will not be pursued. 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. Costs incurred in connection with the 1995 HMR Osteoporosis Agreement (Note 3) have been fully amortized over a three-year period ending November 1998. Accumulated amortization of intangible and other assets at December 31, 1999 and 1998 was \$3,625,000 and \$2,902,000, respectively.

Revenue Recognition

Research revenue under collaborative research and development agreements is recognized as research is performed under the terms of the respective applicable agreement. Amounts received in advance under the 1995 HMR Osteoporosis Agreement (Note 3) were recorded as deferred revenue and were being amortized over the minimum term of the agreement, using the straight-line method. Revenue earned upon the attainment of research or product development milestones is recognized when achieved. Research revenue is billed on a cost reimbursement basis, which includes direct costs incurred in connection with research activities and an allocation of certain other costs incurred by the Company, under the terms of the Services Agreements with the Genomics Center (Note 4) is recognized as services are provided. None of the Company's research revenue recognized is refundable.

Segment Reporting

Effective January 1, 1998, the Company adopted SFAS No. 131, Disclosures about Segments of an Enterprise and Related Information, which requires disclosure of certain financial and descriptive information about a company's operating segments. The Company organizes itself as one segment reporting to the chief operating decision maker. Products and services consist primarily of research and development activities with collaborative and strategic partners in the pharmaceutical industry.

Stock-Based Compensation

The company applies the intrinsic value method to account for employee stock-based compensation and the fair value method to account for stock-based compensation to consultants.

Earnings Per Share

Basic earnings per common share are computed using the weighted average number of common shares outstanding during each year. Diluted earnings per common share reflect the effect of the Company's outstanding options, warrants and convertible securities, except where such items would be anti-dilutive. In years in which a net loss is reported, basic and diluted per share amounts are the same. In 1998 and 1997, options, warrants, and the effects of conversion of convertible securities amounting to 3,504,188 and 4,202,996 shares of common stock, respectively, were not included in the computation of dilutive earnings per share because this effect would be antidilutive.

The following is a reconciliation of the shares used in the calculation of basic and diluted net income per share for the year ended December 31, 1999. Potentially dilutive shares were calculated using the treasury stock method:

Weighted average shares for basic shares outstanding	22,004,646
Incremental shares from assumed conversion of preferred stock	11,846,541
Incremental shares from assumed exercise of potentially dilutive stock options	596,828

Weighted average shares for dilutive shares outstanding	34,448,015
	=====
Net income attributable to common stockholders	\$ 17,757,279
Effect of repurchase and accretion costs attributable to redeemable convertible preferred stock	6,434,799

Net income attributable to common stockholders	\$ 24,192,078
	=====

Accounting Change

In April 1998, the American Institute of Certified Public Accountants issued Statement of Position ("SOP") 98-5, Reporting on the Cost of Start-Up Activities, which required that all organizational costs be expensed as incurred. The Company adopted this SOP effective January 1, 1999 and recorded a charge of \$364,000 as a cumulative effect of change in accounting principle.

Recently Issued Financial Accounting Standard

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. The new standard requires that all companies record derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. Management is currently assessing the impact of SFAS No. 133, as amended, on the consolidated financial statements of the Company. The Company will adopt this accounting standard on January 1, 2001, as required.

2. MARKETABLE SECURITIES

The Company has classified its marketable securities as available-for-sale and, accordingly, carries such securities at aggregate fair value. At December 31, 1999 the Company held no marketable securities. At December 31, 1998, the Company's marketable securities consisted of the following:

	AGGREGATE FAIR VALUE	AMORTIZED COST BASIS	GROSS UNREALIZED	
			GAINS	LOSSES
U.S. Government obligations	\$ 583,720	\$ 603,222		\$ (19,502)
Corporate debt securities	7,090,768	7,105,647	\$ 3,772	(18,651)
	-----	-----	-----	-----
Total	\$ 7,674,488	\$ 7,708,869	\$ 3,772	\$ (38,153)
	=====	=====	=====	=====

Realized gains and losses on sales of marketable securities were not material during the years ended December 31, 1999, 1998 and 1997. Changes in market values resulted in a reduction of \$34,381, \$13,191 and \$55,127 in net unrealized losses for the years ended December 31, 1999, 1998 and 1997, respectively.

3. COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENTS

In November 1995, the Company entered into an agreement with Hoechst Marion Roussel ("HMR") (the "1995 HMR Osteoporosis Agreement") to collaborate on the discovery and development of drugs to treat osteoporosis and related bone diseases, one of the Company's signal transduction inhibitor programs. Under the 1995 HMR Osteoporosis Agreement, the Company granted to HMR exclusive rights to develop and commercialize these drugs worldwide. Under the terms of this Agreement, HMR made an initial cash payment to the Company of \$10,000,000, agreed to provide research funding in equal quarterly amounts of \$1,000,000 up to an aggregate of \$20,000,000 over a five-year period and agreed to provide an aggregate of up to \$10,000,000 upon the attainment of certain research milestones. This Agreement further provided for the payment of royalties to the Company based on product sales. Revenue recognized under the 1995 HMR Osteoporosis Agreement amounted to \$6,000,000, \$6,778,000 and \$7,333,000 for 1999, 1998 and 1997, respectively, including \$2,000,000 for the achievement of the second research milestone in 1999.

In connection with the sale of the Company's 50% interest in the Genomics Center (Note 4), all drug candidates and related technologies resulting from this agreement were assigned to the Company, and any further obligations of HMR to fund the Company's internal research were terminated.

The Company was the grantee organization of four grants from the National Institutes of Health to conduct research related to signal transduction. Costs incurred and the corresponding research revenue recognized were \$0, \$114,000 and \$543,000 for 1999, 1998 and 1997, respectively.

4. HOECHST-ARIAD GENOMICS CENTER, LLC

Formation of the Genomics Center

In March 1997, the Company entered into an agreement which established a 50/50 joint venture with Aventis Pharmaceuticals, Inc. (formerly known as Hoechst Marion Roussel, Inc.) ("Aventis") to pursue functional genomics (the "1997 HMR Genomics Agreement") with the goal of identifying genes that encode novel therapeutic proteins and small-molecule drug targets. The joint venture, named the Hoechst-ARIAD Genomics Center, LLC (the "Genomics Center"), is located at the Company's facility in Cambridge, Massachusetts. Under the terms of the 1997 HMR Genomics Agreement, the Company and Aventis agreed to commit \$85,000,000 to the establishment of the Genomics Center and its first five years of operation. The Company and Aventis agreed to jointly fund \$78,500,000 of operating and related costs, and ARIAD agreed to invest up to \$6,500,000 in leasehold improvements and equipment for use by ARIAD in conducting research on behalf of the Genomics Center. Through December 31, 1999, the Company had invested \$6,500,000 in leasehold improvements and equipment and funded \$14,997,000 in operating and related costs. Aventis committed to provide ARIAD with capital adequate to fund ARIAD's share of such costs through the purchase of up to \$49,000,000 of ARIAD series B convertible preferred stock over the five-year period, including an initial investment of \$24,000,000, which was completed in March 1997 and \$5,747,000 which was completed in January 1999 (Note 7). Using a loan

facility made available by Aventis, ARIAD borrowed \$1,801,000 during 1999 to fund a portion of its investment obligations relating to the Genomics Center.

Services Agreements

The Company also entered into agreements with the Genomics Center to provide research and administrative services (the "Services Agreements") to the Genomics Center on a cost reimbursement basis. ARIAD's costs of providing the research and administrative services to the Genomics Center are charged to research and development expense and general and administrative expense in the consolidated financial statements. Under the Services Agreements, ARIAD billed the Genomics Center for 100% of its cost of providing the research and administrative services; however, because ARIAD was providing 50% of the funding of the Genomics Center, ARIAD recognized as revenue only 50% of the billings to the Genomics Center. The remaining 50% was accounted for as a return of ARIAD's investment in the Genomics Center. Under the Services Agreements, the Company billed the Genomics Center in advance for the next quarter's projected services. At December 31, 1999, the balance sheet advance amount of \$25,707 represents the excess amount from the fourth quarter estimated funding. Revenue recognized pursuant to the Services Agreements amounted to \$6,468,000, \$4,951,000 and \$1,357,000 for the years ended December 31, 1999, 1998 and 1997, respectively.

Sale of the Company's 50% Interest in the Genomics Center

On December 31, 1999, the Company completed the sale of its 50% interest in the Genomics Center to Aventis and received: (1) \$40,000,000 in cash, of which \$5,000,000 had been advanced on October 12, 1999, (2) 3,004,436 shares of the Company's series B convertible preferred stock, (3) the forgiveness of \$1,857,000 of long-term debt including accrued interest owed by the Company to Aventis, (4) drug candidates and related technologies resulting from the 1995 HMR Osteoporosis Agreement (Note 3) and (5) the right to use certain genomics and bioinformatics technologies developed by the Genomics Center. In addition, the Company agreed to (1) sublease to Aventis approximately 35,000 square feet of laboratory and office space, for an amount equal to the Company's cost, for a period of up to seven years, (2) assign equipment leases with aggregate rental payments of \$1,793,000 to Aventis (Note 6), and (3) provide certain transitional laboratory support services. The Company recorded a net gain on sale of \$46,440,000 recognizing proceeds of (1) \$40,000,000 in cash, (2) \$8,450,000 equivalent to the fair market value of the common stock underlying the series B convertible preferred stock, (3) \$1,857,000 of long-term debt and interest forgiven; offset by (1) \$2,304,000 of unamortized leasehold improvements associated with laboratory space under sublease, and (2) \$1,563,000 representing the Company's investment account and other costs of completing the sale.

The major components of the Genomics Center's financial position and results of operations are as follows:

	AS OF DECEMBER 31,	
	1999	1998
Advance to ARIAD	\$ 26,000	\$ 3,162,000
Other assets	768,000	804,000
Total assets	\$ 794,000	\$ 3,966,000
Due to Aventis	\$ 311,000	\$ --
Due to ARIAD	--	333,000
Other liabilities	289,000	67,000
Equity	194,000	3,566,000
Total liabilities and equity	\$ 794,000	\$ 3,966,000

	YEAR ENDED DECEMBER 31,	
	1999	1998
Revenues	\$ --	\$ --
Operating expenses:		
ARIAD	12,936,000	9,902,000
Other	2,958,000	1,307,000
Net loss	\$ (15,894,000)	\$ (11,209,000)
ARIAD's 50% share of net loss	\$ (7,947,000)	\$ (5,605,000)
Elimination of intercompany transactions	6,455,000	4,945,000
ARIAD's equity in the net loss of the Genomics Center	\$ (1,492,000)	\$ (660,000)

5. LONG-TERM DEBT

Long-term debt was comprised of the following:

	DECEMBER 31,	
	1999	1998
Bank term note at prime plus 1% (9.75%, at December 31, 1999) payable in monthly installments of \$100,000 plus interest, through July 1, 2002	\$ 3,100,000	\$ 4,300,000
Capital lease obligation, at 9.0%, payable in monthly installments of \$46,518 including interest	--	725,205
Government-sponsored seven-year term note, at prime plus 2.75% (10.5%, at December 31, 1998), payable in monthly installments of \$11,905 plus interest, through November 1, 1999	--	130,955
Total	3,100,000	5,156,160
Less current portion	1,200,000	1,861,021
Long-term debt	\$ 1,900,000	\$ 3,295,139

The bank term note is collateralized by all assets of the Company. The Company may, at its option, pledge marketable securities under the bank term note, and, in such event, the interest rate would be adjusted to the equivalent of 90-day LIBOR plus 1.25%.

The above agreement contains certain covenants that restrict additional indebtedness, capital spending and stock redemption; prohibit dividend distributions; and require the Company to pledge its marketable securities or maintain minimum levels of tangible net worth of \$11,000,000, working capital of \$7,000,000 and liquid assets of \$15,000,000, all as defined.

The aggregate future principal payments are \$1,200,000 in 2000, \$1,200,000 in 2001 and \$700,000 in 2002. Interest payments during 1999, 1998 and 1997 were \$376,000, \$453,000 and \$395,000, respectively.

6. 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 ten-year noncancelable operating lease. The lease expires in July 2002 and has two five-year options to extend. The Company has sublet approximately 40,000 square feet of space to Aventis (Note 4) and other tenants. Rent expense, net of sublease revenue of \$264,000, \$113,000 and \$53,000 for the years ended December 31, 1999, 1998 and 1997, amounted to \$1,225,000, \$1,106,000 and \$945,000, respectively. Future minimum annual rental payments, net of sublease revenues are approximately \$1,692,000 for each of the three years 2000 through 2002.

Equipment Leases

The Company utilizes lease credit facilities from various equipment leasing companies to acquire equipment, which is resold to a lessor at cost, with no resulting gain or loss recognized. The lease agreements, which are classified as operating leases for financial reporting purposes, have terms ranging from three to five years, with various lease renewal or purchase options at the end of the initial term. During the years ended December 31, 1999, 1998 and 1997, the Company entered into sales leaseback transactions amounting to \$309,000, \$2,579,000 and \$2,762,000, respectively. Equipment rental expense for the years ended December 31, 1999, 1998 and 1997 amounted to \$1,832,000, \$1,864,000 and \$1,011,000, respectively. Some of the agreements contain covenants requiring the Company to maintain certain minimum levels of net worth, working capital and liquid assets. Minimum future rental payments under the initial terms of the leases are approximately \$944,000 for 2000, \$859,000 for 2001, \$741,000 for 2002, \$196,000 for 2003 and \$33,000 for 2004.

Collaborative Agreement

In connection with the establishment of the Genomics Center (Note 4), the Company entered into a three-year collaborative agreement with Incyte Pharmaceuticals, Inc. that provides the Company with access to various genomic data through December 31, 2000. The agreement was amended in December 1998 to provide increased data access and increased the annual fees from \$3,000,000 to \$3,750,000 commencing in 1999, of which \$500,000 was reimbursed annually by Aventis. The amount charged to research expense in 1999, 1998 and 1997 was \$3,250,000, \$2,702,000 and \$833,000, respectively. The agreement provided for additional payments for exclusive licenses, the achievement of certain milestones in drug development and royalties on net sales. In connection with the sale of the Company's interest in the Genomics Center, the agreement was terminated without further obligation of the Company.

Licensed Technology

The Company and AGTI have entered into agreements with several universities under the terms of which the Company and AGTI have received exclusive licenses or options 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 aggregated \$105,000, \$300,000 and \$105,000 for 1999, 1998 and 1997, respectively, and are expected to amount to approximately \$127,000 annually for 2000 and 2001, \$232,000 for 2002 and \$162,000 annually for 2003 and 2004. In addition, the agreements provide for payments upon the achievement of certain milestones in drug development, such as the filing of an Investigational New Drug Application or the filing of a New Drug Application for regulatory approval in the United States. 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 its senior officers. The agreements provide for aggregate annual base salaries of \$995,000 and remaining terms of employment of up to two years.

7. STOCKHOLDERS' EQUITY

Series Preferred Stock

The Company has authorized 10,000,000 shares of preferred stock which the Board of Directors is empowered to designate and issue in different series. At December 31, 1999, the Board of Directors had designated 500,000 shares as series A preferred stock, 5,000,000 shares as series B preferred stock, 25,000 shares as series C preferred stock, and 4,475,000 shares remained undesignated.

Series B Convertible Preferred Stock ("Series B Preferred Stock")

In connection with the 1997 HMR Genomics Agreement, on March 18, 1997, Aventis purchased 2,526,316 shares of the Company's Series B Preferred Stock for \$24,000,000 and on January 5, 1999, Aventis purchased an additional 478,120 shares of Series B Preferred Stock for \$5,747,000. In connection with the sale of the Company's interest in the Genomics Center, all shares of Series B

Preferred Stock were redeemed by the Company and retired. The Series B Preferred Stock was convertible one-for-one into common stock upon the earliest to occur of: (i) six months following termination of the Genomics Center, (ii) June 30, 2003, or (iii) upon a change of control of the Company; and, if still outstanding, the Series B Preferred Stock would have been automatically converted on December 31, 2006.

Series C Redeemable Convertible Preferred Stock ("Series C Preferred Stock")

On November 9, 1998, the Company issued 5,000 shares of the Company's Series C Preferred Stock to two institutional investors (the "Investors") and received proceeds of approximately \$5,000,000. Each share of Series C Preferred Stock had a liquidation value of \$1,000, plus an additional amount equal to a 5% per annum accretion amount, accrued from the date of issue, and was convertible into common stock of the Company, at a conversion price equal to the lower of a variable conversion price (the "Variable Price") or \$2.09 per share.

On December 31, 1999, the Company repurchased 2,000 shares of Series C Preferred Stock from one of the investors for an aggregate cash payment of \$3,400,000. On January 14, 2000, the Company completed the repurchase of the remaining 3,000 shares for an aggregate consideration of \$6,925,000 plus 1,078,038 shares of common stock. Each transaction included the cancellation of all rights to purchase additional shares by the investors and the rights held by the Company to require purchase of additional shares of Series C Preferred Stock.

The aggregate premium of \$6,184,799 paid on both transactions has been included in the consolidated statements of operations as repurchase and accretion costs attributable to redeemable convertible preferred stock. Redeemable convertible preferred stock is carried at redemption cost and liquidation cost, respectively at December 31, 1999 and 1998.

Common Stock

On May 11, 1998, the Company completed a private placement of 2,537,500 shares of common stock to a group of institutional investors at a price of \$4.00 per share and received net proceeds of approximately \$9,226,000 after deducting selling commissions and offering expenses. The shares were registered under the Securities Act of 1933, as amended.

Warrants

In 1994, in connection with an initial public offering, the Company issued 2,125,225 warrants with an exercise price of \$8.40 per share, subject to adjustment. These publicly traded warrants expire on December 30, 2000 and are subject to earlier redemption.

Stockholder Rights Plan

On December 15, 1994, the Board of Directors adopted a stockholder rights plan which provided for the distribution to each stockholder of one Series A Preferred Stock purchase right for each outstanding share of common stock. Under certain circumstances involving an acquisition by a person or group of 20% or more of ARIAD common stock or involving a 15% stockholder entering into certain transactions involving the Company, or into certain business combinations, the rights permit the holders (other than such person or group) to purchase ARIAD common stock at a 50% discount. The plan is

designed to protect ARIAD stockholders in the event that an attempt is made to acquire the Company without an offer of fair value.

Minority Interest in Subsidiary

The 6% minority interest in AGTI includes shares owned by Stanford University and Harvard University (3%) issued in 1995 in connection with a license agreement and shares issued to option holders (3%) upon their exercise. Additional stock options are outstanding and, if exercised, would increase the minority interest to 21.7% (Note 8).

8. STOCK OPTION AND STOCK PURCHASE PLANS

ARIAD Stock Option Plans

The Company's 1991 and 1994 Stock Option Plans (the "Plans") provide for the granting of nonqualified and incentive stock options to purchase up to a maximum of 6,285,714 shares of common stock to officers, directors, employees and consultants of the Company. Options become exercisable as specified in the related option agreement, typically over a four-year period, and expire ten years from the date of grant.

Transactions under the Plans for the years ended December 31, 1997, 1998 and 1999 are as follows:

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE PER SHARE
	-----	-----
Options outstanding, January 1, 1997	3,079,361	\$2.57
Granted	618,196	6.53
Forfeited	(63,404)	4.88
Exercised	(91,596)	2.07

Options outstanding, December 31, 1997	3,542,557	3.23
Granted	1,313,775	3.75
Forfeited	(240,154)	4.32
Exercised	(77,441)	2.08

Options outstanding, December 31, 1998	4,538,737	3.34
Granted	2,128,095	1.03
Forfeited	(1,555,588)	3.09
Exercised	(41,875)	1.59

Options outstanding, December 31, 1999	5,069,369	\$2.48
	=====	
Options exercisable, December 31, 1997	2,197,320	\$2.37
	=====	
December 31, 1998	2,618,294	\$2.59
	=====	
December 31, 1999	3,536,268	\$2.47
	=====	

The following table sets forth information regarding options outstanding at December 31, 1999:

RANGE OF EXERCISE PRICES	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE	WEIGHTED AVERAGE REMAINING LIFE (YEARS)	NUMBER OF OPTION SHARES CURRENTLY EXERCISABLE	WEIGHTED AVERAGE EXERCISE PRICE FOR CURRENTLY EXERCISABLE
\$.75-1.25	1,060,895	\$.76	8.1	697,485	\$.75
1.34-2.31	2,477,913	1.82	4.8	1,858,888	1.94
2.68-4.87	989,882	4.08	6.3	596,509	4.05
4.88-7.63	540,679	5.91	5.9	383,386	5.76
\$.75-7.63	5,069,369	\$2.48	6.2	3,536,268	\$2.47

As described in Note 1, the Company uses the intrinsic value method to measure compensation expense associated with grants of stock options to employees. Had the Company used the fair value method to measure compensation, the net income (loss) and net income (loss) per share would have been reported as follows:

	1999	1998	1997
Basic:			
Proforma net income (loss) attributable to common stockholders	\$16,311,325	\$ (27,816,845)	\$ (13,663,496)
Proforma net income (loss) per share	\$.74	\$ (1.33)	\$ (.71)
Diluted:			
Proforma net income (loss) attributable to common stockholders plus repurchase and accretion costs attributable to redeemable convertible preferred stock	\$22,746,124	\$ (27,816,845)	\$ (13,663,496)
Proforma net income (loss) per share	\$.66	\$ (1.33)	\$ (.71)

At December 31, 1999 the Company has 879,923 options available to be issued at future dates under the Plans.

The above disclosure, required by SFAS No. 123, includes only the effect of grants made subsequent to January 1, 1996. For purposes of calculating the above disclosure, the fair value of options on their grant date was measured using the Black-Scholes option pricing model. Key assumptions used to apply this pricing model included a risk-free interest rate of 5.5% for 1999 and 1998 and 6.0% for 1997, expected lives of the option grants ranging from one to six years and expected rates of volatility for the underlying stock of 100% for 1999, 82% for 1998, and 78% for 1997. Using this model, the weighted average fair value per option for all options granted to consultants and employees in 1999, 1998 and 1997 was \$1.09, \$2.75 and \$3.10, respectively.

ARIAD Gene Therapeutics, Inc. Stock Option Plans

The Company's subsidiary, AGTI, adopted stock option plans in 1993 substantially similar to the Plans and reserved 1,785,714 shares of AGTI's common stock for issuance pursuant to such plans. At December 31, 1999, options with respect to 870,710 shares of AGTI's common stock (all granted in 1994) were outstanding at an exercise price of \$.42 per share, and all option shares were exercisable. During 1999, 89,285 options were exercised, and 207,142 option shares were forfeited. During 1998, options with respect to 62,499 shares were exercised at an exercise price of \$.42 per share, and 8,929 option shares were forfeited. If all of the options outstanding at December 31, 1999 had been exercised, the optionees would own 16.4% of the outstanding shares of AGTI.

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. Under this plan, substantially all of its employees may, through payroll withholdings, purchase shares of the Company's stock at a price of 85% of the lesser of the fair market value at the beginning or end of each three-month withholding period. During 1999, 51,259 shares of common stock were issued under the plan.

9. INCOME TAXES

At December 31, 1999, the Company had available for federal tax reporting purposes, net operating loss carryforwards of approximately \$67,400,000, which expire commencing in 2006. The Company also had federal research and development credit carryovers of approximately \$5,200,000, which expire commencing in 2006. Both the net operating loss carryforwards and credits are subject to certain limitations under federal tax law.

The components of deferred income taxes were as follows:

	1999	1998
	-----	-----
Deferred tax liabilities:		
Intangible and other assets	\$ 1,588,000	\$ 1,544,000
Organizational costs	--	2,000
	-----	-----
Total deferred tax liabilities	1,588,000	1,546,000
	-----	-----
Deferred tax assets:		
Net operating loss carryforwards	25,226,000	35,446,000
Tax credit carryovers	8,905,000	7,585,000
Depreciation	2,089,000	1,499,000
Deferred revenue	--	133,000
Other	126,000	58,000
	-----	-----
Total deferred tax assets	36,346,000	44,721,000
	-----	-----
Deferred tax assets, net	34,758,000	43,175,000
Valuation allowance	(34,758,000)	(43,175,000)
	-----	-----
Total deferred taxes	\$ -0-	\$ -0-
	=====	=====

Although the Company earned taxable income in 1999 due to the gain on sale of the Genomics Center, it was able to utilize net operating loss carryforwards to eliminate substantially all taxes due. Since the Company has not yet achieved sustained profitable operations, management believes the tax benefits as of December 1999 and 1998 do not satisfy the realization criteria set forth in SFAS No. 109 and has recorded a valuation allowance for the entire net deferred tax asset. The decrease in the valuation allowance in 1999 was due to utilization of net operating loss carryforwards whereas the increase in the valuation allowance in 1998 and 1997 resulted primarily from net operating loss carryforwards and tax credit carryovers.

10. LITIGATION

The Company was named as a defendant in a purported class action lawsuit commenced in June 1995 in the U.S. District Court for the Southern District of New York. The action named as defendants the Company; the underwriter of the Company's initial public offering and a market maker in the Company's stock, D. Blech & Co.; the managing director and sole shareholder of D. Blech & Co. and former director of the Company, David Blech; certain directors of the Company and the qualified independent underwriter for the initial public offering, Shoenberg Hieber, Inc.

Plaintiff alleged, among other things, that the Company's registration statement for its initial public offering was false and misleading; that Blech & Co. and David Blech participated in purported sham sales of the Company's securities after the offering in an alleged attempt to artificially inflate the sales prices of the Company's common stock; and that all of the defendants knew, or should have known, of this alleged scheme and are liable for failing to disclose the alleged scheme to the investing public. There were no allegations asserting specific acts of participation or wrongdoing by the Company. Plaintiff alleged that the foregoing constituted violations of Sections 11 and 12(2) of the Securities Act of 1933, Section 10(b) and Rule 10b-5 under the Securities Exchange Act of 1934 and common law fraud, and sought unspecified damages, costs and attorneys' fees.

The Company filed a motion to dismiss, which was denied in June 1996. In late 1998, the parties stipulated to, and the Court approved, the certification of a class of persons who purchased the securities of the Company from the time of its initial public offering on May 20, 1994 through and including September 21, 1994.

In December 1999, the plaintiff and the Company reached an agreement in principle to settle the matter. The parties have yet to enter into a formal settlement agreement, which if, and when, executed will have to be submitted to the Court for approval. There can be no assurance that the settlement agreement will be signed and, if signed, if, and when, the Court will approve the settlement. The Company believes, however, based on discussions leading to the agreement in principle, that such settlement will not have a material adverse effect on the Company's consolidated financial position or results of operations.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not Applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The directors, officers and key employees of the Company are as follows:

NAME	AGE	POSITION
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Harvey J. Berger, M.D.....	49	Chairman of the Board of Directors, President and Chief Executive Officer
Sandford D. Smith.....	52	Vice Chairman of the Board of Directors
Jay R. LaMarche.....	53	Executive Vice President, Chief Financial Officer, Treasurer and Director
John D. Iuliucci, Ph.D.....	57	Senior Vice President, Drug Development
Manfred Weigele, Ph.D.....	67	Senior Vice President, Chief Scientific Officer
David L. Berstein, Esq.....	47	Vice President, Chief Patent Counsel
David C. Dalgarno, D.Phil.....	42	Vice President, Physical and Chemical Sciences
Tomi K. Sawyer, Ph.D.....	45	Vice President, Drug Discovery
Timothy P. Clackson, Ph.D.....	34	Director, Gene Therapy
Joseph Bratica.....	36	Director, Finance and Controller
Vaughn D. Bryson.....	61	Director
John M. Deutch, Ph.D.....	61	Director
Philip Felig, M.D.....	63	Director
Ralph Snyderman, M.D.....	59	Director
Raymond S. Troubh.....	73	Director

Harvey J. Berger, M.D. is our principal founder and has served as our Chairman of the Board, President and Chief Executive Officer since April 1991. From 1986 to 1991, Dr. Berger held a series of senior management positions at Centocor, Inc., a biotechnology company, most recently as Executive Vice President and President, Research and Development Division. He also has held senior academic and administrative appointments at Emory University, Yale University and the University of Pennsylvania and was an Established Investigator of the American Heart Association. Dr. Berger received his A.B. degree in Biology from Colgate University and his M.D. degree from Yale University School of Medicine and did further medical and research training at the Massachusetts General Hospital and Yale-New Haven Hospital.

Sandford D. Smith, one of our Directors since October 1991 and our Vice Chairman since January 1999, is President, Therapeutics International, Genzyme Corporation. From May 1996 to September 1996, he was Vice President and General Manager, Specialty Therapeutics and International Group, Genzyme Corporation, a biotechnology company. Mr. Smith was President and Chief Executive Officer and a Director of Repligen Corporation, a biotechnology company, from 1986 to March 1996. Mr. Smith previously held a number of positions with Bristol-Myers Squibb and Company from 1977 to 1986, including, most recently, Vice President of Corporate Development and Planning for the United States Pharmaceutical and Nutritional Group. Mr. Smith earned his B.A. degree from the University of Denver. Mr. Smith is also a Director of CSPI, a software company.

Jay R. LaMarche has served as our Chief Financial Officer, Treasurer and as one of our Directors since January 1992. He has also served as our Executive Vice President since March 1997. Mr. LaMarche was our Senior Vice President, Finance from January 1992 to February 1997. Prior to joining us, he was Chief Financial Officer and a Director of ChemDesign Corporation, a fine chemicals manufacturer. Prior to his employment at ChemDesign, Mr. LaMarche was a partner with Deloitte Haskins & Sells, a public accounting firm. Mr. LaMarche received his B.B.A. degree in Public Accountancy from the University of Notre Dame and served as an officer in the United States Navy.

John D. Iuliucci, Ph.D. has served as our Senior Vice President, Drug Development since January 1999. Dr. Iuliucci also served as our Vice President, Drug Development from October 1996 to December 1998 and our Vice President, Preclinical Development from June 1992 to September 1996. Prior to joining us, Dr. Iuliucci was Director of Preclinical Pharmacology and Toxicology at Centocor, Inc., a biotechnology company, from 1984 to 1992. From 1975 to 1984, Dr. Iuliucci headed the Drug Safety Evaluation Department at Adria Laboratories, a pharmaceutical company. He was a Senior Toxicologist at the Warner-Lambert Pharmaceutical Research Institute from 1972 to 1975. Dr. Iuliucci received a B.S. degree in Pharmacy and M.S. and Ph.D. degrees in Pharmacology from Temple University.

Manfred Weigele, Ph.D. has served as our Senior Vice President and Chief Scientific Officer since March 1999. Dr. Weigele also served as our Senior Vice President, Physical and Chemical Sciences from October 1996 to February 1999 and as our Senior Vice President, Research - Chemistry from October 1991 to September 1996. Prior to joining us, from 1985 to 1991, Dr. Weigele was a Vice President and Group Director of Chemistry Research for Hoffmann-LaRoche Inc., a pharmaceutical company, where he directed chemistry research. He joined Hoffmann-LaRoche, a worldwide pharmaceuticals company, in 1965. Dr. Weigele received his undergraduate training at Technische Universitat in Braunschweig, Germany and his Ph.D. degree from the University of Wisconsin.

David L. Berstein has served as our Vice President, Chief Patent Counsel since September 1993. Prior to joining us, from 1990 through 1993, Mr. Berstein was Patent Counsel at BASF Bioresearch Corporation, a biotechnology company, where he was responsible for intellectual property matters, including patents and licensing. From 1985 to 1990, Mr. Berstein was a patent attorney at Genetics Institute, Inc., a biotechnology company, where he was involved in various aspects of the patent process from patent procurement through litigation. Mr. Berstein joined Genetics Institute from the law firm of Cooper & Dunham of New York, New York. Mr. Berstein received his B.S. degree from the University of Michigan and his J.D. degree from Fordham University School of Law.

David C. Dalgarno, D.Phil. has served as our Vice President, Physical and Chemical Sciences since November 1999. Previously, he served as our Director, Physical and Chemical Sciences from September 1998 to November 1999 and as our Director, Spectroscopy from October 1996 to August 1998. Dr. Dalgarno joined us in March 1992. Prior to joining us, Dr. Dalgarno was a scientist at Schering-Plough Corp. focusing on protein structure determination by nuclear magnetic resonance. Dr. Dalgarno received his B.A. and D.Phil. degrees in Chemistry from the University of Oxford. He received his postdoctoral training in Molecular Biophysics and Biochemistry at Yale University.

Tomi K. Sawyer, Ph.D. has served as our Vice President, Drug Discovery since January 1999 and as our Director, Drug Discovery-Signal Transduction from October 1997 to December 1998. From July 1993 to September 1997, he was Head and Associate Research Fellow, Structure-Based Design and Chemistry at Parke-Davis Pharmaceutical Research, a Division of Warner-Lambert Company, a pharmaceutical company, and Section Director, Peptide and Peptidomimetic Chemistry at Parke-Davis from July 1991 to July 1993. Dr. Sawyer received his Ph.D. in Organic Chemistry from the University

of Arizona and his B.S. in Chemistry from Moorhead State University.

Timothy P. Clackson, Ph.D. has served as our Director, Gene Therapy since August 1999. Previously, he served as our Department Head, Gene Therapy Biology from March 1999 to August 1999. Dr. Clackson joined us in December 1994. Prior to joining us, Dr. Clackson was a postdoctoral fellow at Genentech, Inc., a biotechnology company, from 1991 to 1994, where he studied the molecular basis for human growth hormone function. Dr. Clackson received his Ph.D. in Biology from the University of Cambridge, for research conducted at the MRC Laboratory of Molecular Biology into antibody engineering and the development of phage display technology. Dr. Clackson received his B.A. in Biochemistry from the University of Oxford.

Joseph Bratica has served as our Director of Finance, Controller since January 1999. Mr. Bratica has also served as our Assistant Controller from January 1997 to December 1998 and as our Accounting Manager from August 1994 to December 1996. Prior to joining us, he was Accounting Manager at Creative BioMolecules, Inc., a biotechnology company, from 1992 to 1994. Mr. Bratica received his B.A. in Accounting from Suffolk University.

Vaughn D. Bryson, one of our Directors since February 1995, is President of Life Science Advisors, Inc., a healthcare consulting company. Mr. Bryson was a thirty-two year employee of Eli Lilly & Co. from 1961 to 1993 and served as President and Chief Executive Officer of Eli Lilly from 1991 to 1993. He served as Executive Vice President of Eli Lilly from 1986 until 1991. He also served as member of Eli Lilly's Board of Directors from 1984 until his retirement in 1993. Mr. Bryson was Vice Chairman of Vector Securities International Inc., an investment banking firm, from April 1994 to December 1996. He also is a Director of Chiron Corporation, a biotechnology company, Fusion Medical Technologies, Inc., a biotechnology company, Athergenics, Inc., a biotechnology company, Amylin Pharmaceutical, Inc., a biotechnology company and Quintiles Transnational Corporation, a pharmaceutical services company. He received a B.S. degree in Pharmacy from the University of North Carolina and completed the Sloan Program at the Stanford University Graduate School of Business.

John M. Deutch, Ph.D., one of our Directors since March 1997, is an Institute Professor at the Massachusetts Institute of Technology. From 1992 to 1997, he previously served as Director of Central Intelligence, Deputy Secretary of Defense, and Undersecretary of Defense (Acquisition and Technology). Prior to this, he was Provost of the Massachusetts Institute of Technology, Dean of the School of Science, Chairman of the Department of Chemistry and the Karl Taylor Compton Professor of Chemistry. Mr. Deutch received his B.A. degree from Amherst College and his D.Sc. degree from the Massachusetts Institute of Technology and was a postdoctoral fellow at the National Institutes of Health. Mr. Deutch is a Director of Citicorp, a financial services company, CMS Energy Corporation, an energy company, Cummins Engine Company, Inc., a manufacturer of engines and engine components, Raytheon, Inc., a defense and commercial electronics company, and Schlumberger Ltd., an oil and gas equipment services company.

Philip Felig, M.D., one of our Directors since October 1991, has been in medical practice specializing in endocrinology and diabetes as an Attending Physician on the Senior Medical Staff at Lenox Hill Hospital since 1987. Prior to this, from 1986 to 1987, he was Chief Executive Officer of Sandoz Pharmaceuticals Corporation, a pharmaceutical company, and from 1984 to 1987, President of the Sandoz Research Institute. Prior to this, Dr. Felig held a series of academic positions at the Yale University School of Medicine, including Professor and Vice-Chairman of the Department of Medicine

and Chief of Endocrinology. Dr. Felig received his B.A. degree from Princeton University and his M.D. degree from the Yale University School of Medicine and did further medical training at the Yale-New Haven Hospital, the Joslin Laboratory at Harvard Medical School and the Peter Bent Brigham Hospital. Dr. Felig also holds an Honorary Doctor of Medicine from the Karolinska Institute.

Ralph Snyderman, M.D., one of our Directors since June 1998, has been Chancellor for Health Affairs, Dean, School of Medicine at Duke University, and President and Chief Executive Officer of Duke University Health System since March 1989. He was formerly Senior Vice President of Medical Research and Development at Genentech, Inc., a biotechnology company from January 1987 to May 1989. Dr. Snyderman is a Director of Proctor and Gamble, Inc., a consumer products and healthcare company. Dr. Snyderman received his M.D. degree from the State University of New York and his B.S. degree from Washington College, Chestertown, Maryland.

Raymond S. Trough, one of our Directors since October 1991, has been a financial consultant for more than five years. Prior to this, he was a general partner of Lazard Freres & Co., an investment banking firm, and a governor of the American Stock Exchange. Mr. Trough is a Director of Diamond Offshore Drilling, Inc., a contract drilling company, Foundation Health Systems, Inc., a managed healthcare company, General American Investors Company, Inc., an investment trust company, Gentiva Health Services, Inc., a healthcare provider, OIsten Corporation, a staffing services company, Petrie Stores Corporation, a liquidating trust, Starwood Hotels & Resorts, Inc., a hotel operating company, Triarc Companies, Inc., a food and beverage company and WHX Corporation, a steel products company. He received his A.B. degree from Bowdoin College and his LL.B. degree from Yale Law School.

SECTION 16 FILINGS

Section 16(a) of the Exchange Act requires our directors, executive officers and beneficial owners of more than 10% of our Common Stock to file reports of ownership and changes of ownership with the Commission on Forms 3, 4 and 5. We believe that during the fiscal year ended December 31, 1999 our directors, executive officers and beneficial owners of more than 10% of our Common Stock complied with all applicable filing requirements. In making these disclosures, we have relied solely on information filed with the Commission.

ITEM 11. EXECUTIVE COMPENSATION

The information appearing in our Proxy Statement for its 2000 Annual Meeting of Stockholders under the caption "Executive Compensation" is incorporated herein by this reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information appearing in our Proxy Statement for its 2000 Annual Meeting of Stockholders under the caption "Security Ownership of Certain Beneficial Owners and Management" is incorporated herein by this reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information appearing in our Proxy Statement for its 2000 Annual Meeting of Stockholders under the caption "Certain Relationships and Related Transactions" is incorporated herein by this reference.

PART IV

ITEM 14: EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a) (1) The following Consolidated Financial Statements, Notes thereto and Independent Auditors' Report are incorporated herein by reference to Item 8:

Independent Auditors' Report
 Consolidated Balance Sheets
 Consolidated Statements of Operations
 Consolidated Statements of Stockholders' Equity
 Consolidated Statements of Cash Flows
 Notes to Consolidated Financial Statements

(a) (2) We are not required to file any financial statement schedules

The Exhibits listed in the Exhibit Index are filed herewith in the manner set forth therein.

(b) Reports on Form 8-K

We filed a Current Report on Form 8-K on November 12, 1999 to announce: (i) the entry into a letter of intent with Hoechst Marion Roussel, Inc. pursuant to which HMR confirmed its intention to acquire our 50% interest in the Hoechst-ARIAD Genomics Center, LLC; (ii) the entry into a stock repurchase agreement with Brown Simpson Strategic Growth Fund, Ltd. and Brown Simpson Strategic Growth Fund, L.P.; and (iii) the commencement of a civil action against HFTP Investments, LLC, an affiliate of Promethean Investment Group, LLC.

We filed a Current Report on Form 8-K on December 8, 1999 to announce a one-year extension of the expiration date of our common stock purchase warrants from December 30, 1999 to December 30, 2000.

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 BOSTON AND COMMONWEALTH OF MASSACHUSETTS ON THE 28TH OF MARCH, 2000.

ARIAD PHARMACEUTICALS, INC.

BY: /s/ Harvey J. Berger, M.D.

NAME: HARVEY J. BERGER, M.D.
TITLE: CHAIRMAN, PRESIDENT AND
CHIEF EXECUTIVE OFFICER

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES EXCHANGE ACT OF 1934, THIS REPORT HAS BEEN SIGNED BELOW BY THE FOLLOWING PERSONS ON BEHALF OF THE REGISTRANT AND IN THE CAPACITIES AND ON THE DATES INDICATED.

SIGNATURE	TITLE	DATE
/s/ Harvey J. Berger ----- HARVEY J. BERGER, M.D.	CHAIRMAN OF THE BOARD OF DIRECTORS, PRESIDENT AND CHIEF EXECUTIVE OFFICER (PRINCIPAL EXECUTIVE OFFICER)	MARCH 28, 2000
/s/ Sandford D. Smith ----- SANDFORD D. SMITH	VICE CHAIRMAN OF THE BOARD OF DIRECTORS	MARCH 28, 2000
/s/ Jay R. Lamarche ----- JAY R. LAMARCHE	EXECUTIVE VICE PRESIDENT, CHIEF FINANCIAL OFFICER, TREASURER AND DIRECTOR (PRINCIPAL FINANCIAL AND ACCOUNTING OFFICER)	MARCH 28, 2000
/s/ Vaughn D. Bryson ----- VAUGHN D. BRYSON	DIRECTOR	MARCH 28, 2000
/s/ John M. Deutch ----- JOHN M. DEUTCH, PH.D.	DIRECTOR	MARCH 28, 2000
/s/ Philip Felig ----- PHILIP FELIG, M.D.	DIRECTOR	MARCH 28, 2000
/s/ Ralph Snyderman ----- RALPH SNYDERMAN, M.D.	DIRECTOR	MARCH 28, 2000
/s/ Raymond S. Trough ----- RAYMOND S. TROUGH	DIRECTOR	MARCH 28, 2000

EXHIBIT INDEX

EXHIBIT NO.	TITLE
3.1	CERTIFICATE OF INCORPORATION OF THE COMPANY, AS AMENDED (1)
3.2	BY-LAWS OF THE COMPANY, AS AMENDED (5)
3.3	AMENDMENT OF CERTIFICATE OF INCORPORATION OF THE COMPANY, DATED APRIL 8, 1994 (2)
3.4	AMENDMENT OF CERTIFICATE OF INCORPORATION OF THE COMPANY, DATED OCTOBER 4, 1994 (5)
3.5	CERTIFICATE OF DESIGNATIONS IN RESPECT OF SERIES B PREFERRED STOCK OF THE COMPANY (8)
4.1	FORM OF ARIAD PHARMACEUTICALS, INC. COMMON STOCK PURCHASE WARRANT (1)
4.2	PRINCIPAL STOCKHOLDERS' AGREEMENT, DATED AS OF JANUARY 5, 1992, AMONG ARIAD PHARMACEUTICALS, INC., DAVID BLECH, DAVID BLECH AS TRUSTEE OF THE BLECH FAMILY TRUST, MARK S. GERMAIN, HARVEY J. BERGER, HARVEY J. BERGER AND WENDY S. BERGER AS TRUSTEES OF THE BERGER FAMILY TRUST, AVALON VENTURES AND AVALON VENTURES IV. (1)
4.3	FORM OF WARRANT AGREEMENT (WITH FORM OF WARRANT). (3)
4.4	RIGHTS AGREEMENT, DATED AS OF DECEMBER 15, 1994, BETWEEN THE COMPANY AND STATE STREET BANK AND TRUST COMPANY, WHICH INCLUDES THE 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. PURSUANT TO THE RIGHTS AGREEMENT, RIGHT CERTIFICATES WILL NOT BE MAILED UNTIL AFTER THE SEPARATION DATE (AS DEFINED THEREIN). (4)
4.5	AMENDMENT, DATED AS OF APRIL 24, 1995, TO RIGHTS AGREEMENT, DATED AS OF DECEMBER 15, 1994, BETWEEN ARIAD PHARMACEUTICALS, INC. AND STATE STREET BANK AND TRUST COMPANY. (6)
4.6	STOCK PURCHASE AGREEMENT, DATED AS OF APRIL 24, 1995, BETWEEN ARIAD PHARMACEUTICALS, INC. AND BIOTECH TARGET S.A. (7)
4.7	CERTIFICATE OF DESIGNATIONS FOR SERIES C. CONVERTIBLE PREFERRED STOCK (10)
4.8	SECURITIES PURCHASE AGREEMENT AND REGISTRATION RIGHTS AGREEMENT DATED NOVEMBER 9, 1998, BY AND BETWEEN THE COMPANY AND THE BUYERS NAMED THEREIN. (10)
4.9	AMENDMENT TO WARRANT AGREEMENT, DATED AS OF MAY 17, 1999. (11)
4.10	AMENDMENT TO WARRANT AGREEMENT, DATED AS OF DECEMBER 1, 1999. (12)
10.1	LEASE AGREEMENT, DATED JANUARY 8, 1992, BETWEEN ARIAD PHARMACEUTICALS, INC. AND FOREST CITY CAMBRIDGE, INC. (1)
10.2+	EXECUTIVE EMPLOYMENT AGREEMENT, DATED AS OF JANUARY 1, 1992, BETWEEN ARIAD PHARMACEUTICALS, INC. AND HARVEY J. BERGER, M.D. (1)
10.3+	EXECUTIVE EMPLOYMENT AGREEMENT, DATED AS OF JANUARY 3, 1992, BETWEEN ARIAD PHARMACEUTICALS, INC. AND JOAN S. BRUGGE, PH.D. (1)
10.4+	EXECUTIVE EMPLOYMENT AGREEMENT, DATED AS OF JANUARY 1, 1992, BETWEEN ARIAD PHARMACEUTICALS, INC. AND JAY R. LAMARCHE. (1)
10.5+	EXECUTIVE EMPLOYMENT AGREEMENT, DATED AS OF OCTOBER 14, 1991, BETWEEN ARIAD PHARMACEUTICALS, INC. AND MANFRED WEIGLE, PH.D. (1)
10.6	LOAN AND SECURITY AGREEMENT, DATED SEPTEMBER 23, 1992, BY AND BETWEEN ARIAD PHARMACEUTICALS, INC., ARIAD CORPORATION AND BAYBANK BOSTON, N.A. AND RELATED INSTRUMENTS AND DOCUMENTS. (1)
10.7	LOAN AGREEMENT, DATED OCTOBER 28, 1992, AMONG ARIAD CORPORATION, ARIAD PHARMACEUTICALS, INC. AND THE MASSACHUSETTS BUSINESS DEVELOPMENT CORPORATION AND RELATED INSTRUMENTS AND DOCUMENTS. (1)

- 10.8 EQUIPMENT LEASE AGREEMENT, DATED DECEMBER 10, 1992, BY AND BETWEEN ARIAD CORPORATION AND GENERAL ELECTRIC CAPITAL CORPORATION. (1)
- 10.9 MASTER LEASE AGREEMENT, DATED DECEMBER 21, 1992, BY AND BETWEEN ARIAD CORPORATION AND COMDISCO, INC. (1)
- 10.10+ ARIAD PHARMACEUTICALS, INC. 1991 STOCK OPTION PLAN FOR EMPLOYEES, AS AMENDED. (5)
- 10.11+ ARIAD PHARMACEUTICALS, INC. 1991 STOCK OPTION PLAN FOR DIRECTORS. (1)
- 10.12+ ARIAD RETIREMENT SAVINGS PLAN. (1)
- 10.13 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. (9)
- 10.14+ AMENDMENT, DATED APRIL 19, 1994, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND HARVEY J. BERGER, M.D. (3)
- 10.15+ AMENDMENT, DATED MARCH 2, 1994, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND JOAN S. BRUGGE, PH.D. (3)
- 10.16+ AMENDMENT, DATED MARCH 2, 1994, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND JAY R. LAMARCHE. (3)
- 10.17+ AMENDMENT, DATED MARCH 2, 1994, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND MANFRED WEIGELE, PH.D. (3)
- 10.18 UNIT PURCHASE AND TECHNOLOGY RIGHT OF FIRST NEGOTIATION AGREEMENT, DATED MAY 5, 1994, AMONG GENENTECH, INC., ARIAD PHARMACEUTICALS, INC. AND ARIAD GENE THERAPEUTICS, INC. (3)
- 10.19+ AMENDMENT NO. 2, DATED JUNE 30, 1994, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND HARVEY J. BERGER, M.D. (5)
- 10.20+ ARIAD PHARMACEUTICALS, INC. 1994 STOCK OPTION PLAN FOR NON-EMPLOYEE DIRECTORS. (5)
- 10.21 COLLABORATIVE RESEARCH AND LICENSE AGREEMENT, DATED NOVEMBER 5, 1995, BETWEEN ROUSSEL UCLAF AND ARIAD PHARMACEUTICALS, INC. (7)
- 10.22 LICENSE AGREEMENT DATED AS OF SEPTEMBER 12, 1996 BETWEEN MOCHIDA PHARMACEUTICALS CO., LTD. AND ARIAD PHARMACEUTICALS, INC. (8)
- 10.23 JOINT VENTURE AGREEMENT DATED AS OF FEBRUARY 14, 1997 BETWEEN GENOVO, INC. AND ARIAD GENE THERAPEUTICS, INC. (8)
- 10.24 JOINT VENTURE MASTER AGREEMENT DATED AS OF MARCH 4, 1997 BETWEEN HOECHST MARION ROUSSEL, INC. AND ARIAD PHARMACEUTICALS, INC. (8)
- 10.25 STOCK PURCHASE, STANDSTILL AND REGISTRATION RIGHTS AGREEMENT DATED AS OF MARCH 4, 1997 BETWEEN HOECHST MARION ROUSSEL, INC. AND ARIAD PHARMACEUTICALS, INC. (8)
- 10.26 COLLABORATIVE AGREEMENT DATED AS OF MARCH 4, 1997 BETWEEN INCYTE PHARMACEUTICALS, INC. AND ARIAD PHARMACEUTICALS, INC. (8)
- 10.27+ AMENDMENT, DATED JANUARY 1, 1997, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND HARVEY J. BERGER, M.D. (8)
- 10.28+ AMENDMENT, DATED JANUARY 1, 1997, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND JAY R. LAMARCHE (8)
- 10.29+ AMENDMENT, DATED JANUARY 1, 1997, TO EXECUTIVE EMPLOYMENT AGREEMENT BETWEEN ARIAD PHARMACEUTICALS, INC. AND MANFRED WEIGELE, PH.D. (8)
- 10.30+ CONSULTING AGREEMENT, DATED JULY 1, 1997, BETWEEN ARIAD PHARMACEUTICALS, INC. AND JOAN S. BRUGGE, PH.D. (8)
- 10.31+ ARIAD PHARMACEUTICALS, INC. 1997 EMPLOYEE STOCK PURCHASE PLAN (8)
- 10.32+ AMENDMENT TO THE 1991 STOCK OPTION PLAN FOR EMPLOYEES AND CONSULTANTS (8)
- 10.33+ AMENDMENT TO THE 1994 STOCK OPTION PLAN FOR NON-EMPLOYEE DIRECTORS (8)

- 10.34 FOURTH AMENDMENT TO LOAN AND SECURITY AGREEMENT DATED JUNE 27, 1997 WITH BANKBOSTON, N.A. AS SUCCESSOR IN INTEREST TO BAYBANK, N.A. (8)
- 10.35 LICENSE AGREEMENT, DATED JULY 17, 1997, BETWEEN ARIAD PHARMACEUTICALS, INC. AND MITOTIX INC. (8)
- 10.36 TECHNOLOGY PURCHASE AND SALE AGREEMENT AND RELATED AGREEMENTS, DATED JULY 17, 1997, BETWEEN ARIAD PHARMACEUTICALS, INC. AND MITOTIX, INC. (8)
- 10.37 ARIAD PHARMACEUTICALS, INC. 1997 EXECUTIVE COMPENSATION PLAN (9)
- 21.1 SUBSIDIARIES OF THE COMPANY. (3)
- 23.1 CONSENT OF DELOITTE & TOUCHE LLP (13)
- 27.1 FINANCIAL DATA SCHEDULE (13)

- (+) MANAGEMENT CONTRACT OR COMPENSATORY PLAN OR ARRANGEMENT
- (1) INCORPORATED BY REFERENCE TO REGISTRATION STATEMENT ON FORM 10 OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JUNE 25, 1993.
- (2) INCORPORATED BY REFERENCE TO FORM 10-K OF THE COMPANY FOR THE FISCAL YEAR ENDED DECEMBER 31, 1993 FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON APRIL 15, 1994.
- (3) INCORPORATED BY REFERENCE TO REGISTRATION STATEMENT ON FORM S-1 OF THE COMPANY (NO. 33-76414) FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MARCH 11, 1994.
- (4) INCORPORATED BY REFERENCE TO FORM 8-K OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON DECEMBER 21, 1994.
- (5) INCORPORATED BY REFERENCE TO FORM 10-K OF THE COMPANY FOR THE FISCAL YEAR ENDED DECEMBER 31, 1994 FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MARCH 30, 1995.
- (6) INCORPORATED BY REFERENCE TO FORM 8-K OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MAY 15, 1995.
- (7) INCORPORATED BY REFERENCE TO FORM 10-K OF THE COMPANY FOR THE FISCAL YEAR ENDED DECEMBER 31, 1995 FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MARCH 15, 1996.
- (8) INCORPORATED BY REFERENCE TO FORMS 10-Q OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MAY 12, 1997, AUGUST 12, 1997 AND NOVEMBER 12, 1997.
- (9) INCORPORATED BY REFERENCE TO FORM 10-K OF THE COMPANY FOR THE FISCAL YEAR ENDED DECEMBER 31, 1997 FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MARCH 5, 1998.
- (10) INCORPORATED BY REFERENCE TO FORM 8-K OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON NOVEMBER 12, 1998.
- (11) INCORPORATED BY REFERENCE TO FORM 8-K OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MAY 18, 1999.
- (12) INCORPORATED BY REFERENCE TO FORM 8-K OF THE COMPANY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON DECEMBER 8, 1999.
- (13) FILED HEREWITH.

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INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statement Nos. 33-90854 and 333-36597 of ARIAD Pharmaceuticals, Inc. on Form S-8 and Registration Statement Nos. 333-69689, 33-85166 and 333-51687 of ARIAD Pharmaceuticals, Inc. on Form S-3 of our report dated February 4, 2000 (which report expresses an unqualified opinion and includes an explanatory paragraph referring to a change in accounting principle in 1999 relating to accounting for start-up activities), appearing in this Annual Report on Form 10-K of ARIAD Pharmaceuticals, Inc. for the year ended December 31, 1999.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
March 28, 2000

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THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE 10-K FOR THE YEAR ENDED DECEMBER 31, 1999, AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

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