ARRAY BIOPHARMA INC
Form 424B5
November 30, 2004

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The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS SUPPLEMENT | Subject to completion | November 29, 2004

(To Prospectus dated June 18, 2004)

6,000,000 Shares

Common Stock

We are offering all of the 6,000,000 shares of common stock offered by this prospectus supplement.

Our common stock is quoted on the Nasdaq National Market under the symbol "ARRY." On November 26, 2004, the last reported sale price of our common stock on the Nasdaq National Market was $8.46 per share.

Investing in our common stock involves a high degree of risk. Before buying any shares, you should read carefully the discussion of material risks of investing in our common stock under the heading "Risk factors" beginning on page S-10 of this prospectus supplement and on page 9 of the accompanying prospectus.

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

	Per share	Total
Public offering price	$	$
Underwriting discounts and commissions	$	$
Proceeds, before expenses, to us	$	$

The underwriters may also purchase from us up to an additional 900,000 shares of our common stock at the public offering price less the underwriting discounts and commissions to cover over-allotments, if any, within 30 days of the date of this prospectus supplement.

The underwriters are offering the shares of our common stock as described in "Underwriting." Delivery of the shares will be made on or about , 2004.

Sole Book-Running Manager

UBS Investment Bank

Legg Mason Wood Walker
Incorporated

Piper Jaffray

Thomas Weisel Partners LLC

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and the underwriters have not, authorized anyone to provide information different from that contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. Neither the delivery of this prospectus supplement nor the sale of shares of common stock means that information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus is correct after the date of this prospectus supplement. This prospectus supplement, or information incorporated by reference that is of a more recent date than the accompanying prospectus, may add, update or change information in the accompanying prospectus. These documents do not constitute an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstance under which the offer or solicitation is unlawful.

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Prospectus Supplement

Prospectus

References in this prospectus supplement to "Array," "the company", "we", "our" or "us" refer to Array BioPharma Inc. Our trademarks include the Array BioPharma logo and the terms "Array BioPharma", "Array BioPharma The Discovery Research Company", "Turning Genomics Into Breakthrough Drugs", "Optimer", and "Array Discovery Platform". Other trademarks and trade names appearing in this prospectus supplement and the accompanying prospectus are the property of the respective holders of such trademarks and trade names.

Prospectus supplement summary

This summary does not contain all of the information that you should consider before investing in our common stock. You should read this entire prospectus supplement and the accompanying prospectus carefully, including "Risk factors," and the financial statements and other information incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment in our common stock.

OUR BUSINESS

We are a biopharmaceutical company focused on the discovery, development and commercialization of orally active drugs to address significant unmet medical needs. Our proprietary drug development pipeline is primarily focused on the treatment of cancer and inflammatory disease and includes several small molecule drug candidates that are designed to regulate targets in therapeutically important biologic pathways. In addition, leading pharmaceutical and biotechnology companies access our drug discovery technologies and expertise through collaborations to design, create, optimize and evaluate drug candidates across a broad range of therapeutic areas. Our goal is to be the most efficient inventor of therapeutic products in the pharmaceutical industry.

Using the Array Discovery Platform, our integrated suite of drug discovery technologies, we have identified multiple drug candidates in our own proprietary programs and in collaborations with other drug companies. Our proprietary research has resulted in out-licensing programs to AstraZeneca and Genentech, two of the world's leading oncology companies. To date, our out-license and collaboration agreements have generated $18 million in up-front payments, $5 million in milestone payments and, from our inception through September 30, 2004, we have recognized $129 million in research funding revenue from our collaborators. Under our existing collaboration agreements, we have the potential to earn up to approximately $200 million in additional milestone payments if we achieve all of the drug discovery objectives under these agreements, as well as royalties on any resulting product sales from 14 different programs.

Proprietary Research and Development

Our proprietary research focuses on biologic functions, or pathways, which have been identified as important in the treatment of human disease based on human clinical, preclinical or genetic data. We seek to create first-in-class drugs against important therapeutic targets within these pathways to treat patients with serious or life-threatening conditions, primarily in cancer, inflammatory disease and other large markets. In addition, we identify opportunities to improve upon existing therapies or drugs in clinical development by creating drug candidates with superior, or best-in-class, drug characteristics, including efficacy, tolerability or dosing, to provide safer, more effective drugs.

We have invested approximately $40 million in our proprietary research from our inception through September 30, 2004. This investment has resulted in the out-licensing of a cancer program to AstraZeneca and two cancer programs to Genentech. Our agreements with AstraZeneca and Genentech each provide for up-front payments, research funding, success-based milestone payments and royalties on product sales.

In addition, we have advanced one cancer program into regulated safety assessment which is intended to generate data to support the filing of an Investigational New Drug Application (IND) with the Food and Drug Administration. We are evaluating potential clinical candidates for *in vivo* efficacy and exploratory safety in three other programs that we may advance into regulated safety assessment. We are also evaluating or developing compounds against over a dozen targets for new drug research and development in cancer and inflammatory disease as well as other therapeutic areas. Our programs in

other therapeutic areas have carefully defined goals and are directed at areas we believe have significant market potential or unmet medical needs or have synergies with existing research efforts.

Our Drug Development Pipeline

The following pipeline chart shows our seven most advanced programs in the areas of cancer and inflammatory disease and their stage in the drug discovery process.

AstraZeneca ARRY-142886 (AZD6244)/MEK for Oncology

ARRY-142886 is a novel, selective, ATP non-competitive inhibitor of MEK (MAP-erk kinase) 1 / 2 that has demonstrated nanomolar activity against isolated MEK enzyme and numerous cancer cell lines. MEK, as part of the ras/raf/MEK/erk pathway, regulates cell proliferation, survival, migration and differentiation and is a critical enzyme at the intersection of several other biologic pathways. Oral administration of ARRY-142886 has demonstrated tumor suppressive or regressive activity in multiple preclinical models of human cancer, including melanoma and pancreatic, colon, lung and breast cancers. We believe our MEK inhibitors' advantages over current therapies may include targeting of certain cancers with over-activation of MEK or activating pathway mutations, as well as improved efficacy linked to the tissue penetration of small molecule drugs.

In December 2003, we entered into an out-licensing and collaboration agreement with AstraZeneca to develop our MEK program in the field of oncology. Under the agreement, AstraZeneca acquired exclusive worldwide rights to our clinical development candidate, ARRY-142886, and certain second-generation compounds we develop under the collaboration for oncology indications. We retain the rights to all non-oncology therapeutic indications for MEK compounds not selected by AstraZeneca for development. Under the agreement, we received from AstraZeneca an up-front payment of $10 million and a payment of $4 million upon initiation of Phase I clinical testing for ARRY-142886. The agreement also provides for research funding, potential additional development milestone payments of over $81 million and royalties on product sales.

We filed an IND in January 2004 for ARRY-142886 and initiated Phase I clinical testing in June 2004. We are collaborating with AstraZeneca on process research for this compound and are manufacturing clinical dosage forms for the clinical trial. In addition, we are responsible for creating a select number of second-generation MEK compounds, from which AstraZeneca will have the option to select a certain number of compounds for inclusion in the license. We are performing process research and cGMP manufacturing of Phase I clinical materials for the additional compounds AstraZeneca selects and are funding and managing the Phase I clinical trial. AstraZeneca is responsible for all other aspects

of clinical development and commercialization for ARRY-142886 and other compounds it licenses. AstraZeneca is providing research funding to us for all activities that we perform under the agreement other than the Phase I clinical trial.

Genentech Oncology Collaboration Programs

We entered into a licensing and collaboration agreement with Genentech in December 2003 to develop small molecule drugs against multiple therapeutic targets in the field of oncology. We initiated this collaboration with Genentech to advance two of our proprietary oncology programs into clinical development. These programs include small molecule leads we developed along with additional, related intellectual property. Under the agreement, Genentech has made an up-front payment to us, is providing research funding and has agreed to pay us potential development milestone payments and royalties on any resulting product sales. Genentech is responsible for clinical development and commercialization of the resulting products. Genentech has the right to add additional programs to this collaboration.

Our Drug Discovery Efforts

Cancer Programs

Many tumors require certain growth factors to stimulate aberrant growth, prolong survival and promote differentiation. These growth factors interact with proteins in the cell membrane, including proteins called Type I receptor kinases, which transmit their growth signal into the cell through a cascade of enzymatic events. These receptors, including EGFR, ErbB-2, VEGF and PDGF, are found to be over-expressed, or over-activated, in numerous human tumors. Several drugs currently on the market or in development, such as Herceptin®, Iressa®, Avastin® and Erbitux®, target these receptors, demonstrating their importance in cancer treatment. In addition, certain enzymes within biologic pathways are important for tumor proliferation. We believe interfering with these enzymes and blocking multiple pathways simultaneously in tumors will likely play significant roles in future cancer treatments.

ErbB-2 Inhibitors. ErbB-2 is a receptor kinase target that has been found to be over-expressed in human breast and other cancers. We have identified orally active, small molecule ErbB-2 inhibitors, which have shown potency, good drug characteristics and a low side effect profile in preclinical models of human cancer, and we are in the process of evaluating these inhibitors with the goal of selecting a clinical candidate. Herceptin is an intravenously dosed protein therapeutic currently on the market that modulates ErbB-2. We believe our ErbB-2 inhibitors' advantages may include improved efficacy linked to tissue penetration, including into the brain, and efficacy in combination therapy with current therapeutics, such as Erbitux, Iressa, Avastin and Taxol®, as well as cost effectiveness.

EGFR / ErbB-2 Inhibitors. EGFR is a receptor kinase target that has been found to be over-expressed in numerous human cancers, including breast, lung, pancreatic, and head and neck cancers. The concurrent inhibition of both EGFR and ErbB-2 to provide enhanced efficacy in cancer treatment has been hypothesized in the scientific literature. Currently, there is no single drug on the market that inhibits both EGFR and ErbB-2. Erbitux, an intravenously dosed protein therapeutic, and Iressa, a small molecule, orally dosed inhibitor, are drugs currently on the market that only modulate EGFR.

We have nominated an orally active, small molecule dual EGFR/ErbB-2 inhibitor as a potential clinical candidate, which has shown good potency and minimal side effect profiles in preclinical models of human cancer. We have initiated manufacturing for regulated safety assessment and formulation studies for this candidate. We believe our dual inhibitors' advantages may include improved efficacy linked to tissue penetration, including into the brain, as well as ease of use and cost effectiveness. We continue to evaluate additional inhibitors in advanced

preclinical pharmacology and safety models with the goal of potentially selecting a second generation compound.

Inflammation Programs

Scientific literature has documented the role of certain pro-inflammatory proteins, or cytokines, in the initiation, progression and augmentation of acute and chronic inflammatory diseases, including rheumatoid arthritis, psoriasis, inflammatory bowel disease and asthma, and other degenerative diseases, such as chronic obstructive pulmonary disease, diabetic complications, fibrotic organ failure and various cardiovascular indications. These cytokines include interleukin-1 (IL-1), tumor necrosis factor (TNF) and interleukin-6 (IL-6). A number of injectable protein therapeutics that regulate TNF or IL-1 activity have already demonstrated clinical efficacy or are under clinical evaluation for the treatment of acute and chronic inflammatory and degenerative diseases. Intravenously-dosed protein therapeutics currently on the market, including Enbrel®, Remicade®, Humira® and Kineret®, bind to and modulate the activity of TNF or IL-1. We believe orally active drugs that produce the same effect could capture and expand the current multi-billion dollar market.

MEK Inhibitors. MEK is a kinase target that has demonstrated a role in the biosynthesis of TNF and IL-1. Our scientists have discovered MEK inhibitors that selectively interfere with this biosynthetic process, while not inhibiting the production of the anti-inflammatory cytokine IL-10. We have also advanced one MEK inhibitor, ARRY-142886, into Phase I clinical development for the treatment of cancer. Given our experience with the safety profile of MEK inhibitors in pre-clinical studies, we believe inhibition of MEK will have applications in diseases caused by the over-production of IL-1 and TNF. We have identified several series of orally active, small molecule MEK inhibitors, which have shown potency, good drug characteristics and low side effect profiles in preclinical models of human arthritis, pulmonary disease and inflammatory bowel disease. We believe our MEK inhibitors may provide broad therapeutic benefits in the treatment of inflammatory and chronic degenerative diseases. We are in the process of evaluating these inhibitors in advanced preclinical pharmacology and safety models with the goal of selecting a clinical candidate.

p38 Inhibitors. Mitogen-activated protein kinases (MAP kinases) are proteins that control cell responses to inflammation, as well as stress factors and growth signals. p38 MAP kinase, a member of this protein family, controls the production of certain growth factors and inflammatory cytokines. Activation of p38 MAP kinase results in increased production of cytokines, such as IL-1, TNF, IL-6 and activates the inflammatory cyclooxygenase pathway. We have identified orally active, small molecule p38 inhibitors that have shown potency, good drug characteristics and a low side effect profile in preclinical models of human arthritis and inflammatory pulmonary disorders. These compounds resulted from our *de novo* drug design program, which couples x-ray crystallographic structural data with our proprietary molecular modeling technologies. We believe our p38 inhibitors' advantages may include superior potency for TNF inhibition in human whole blood, defined tissue distribution and improved efficacy linked to dual IL-1/TNF inhibition. We are in the process of evaluating these inhibitors in advanced preclinical pharmacology and safety models with the goal of selecting a clinical candidate.

Other Programs

We also have programs in other therapeutic areas that are in various stages of preclinical development. These programs have carefully defined goals and are directed at areas we believe have significant market potential or unmet medical needs or have synergies with existing research efforts.

Collaborative Research and Development

We have research collaborations with leading pharmaceutical and biotechnology companies that include design, creation and optimization of drug candidates across a broad range of therapeutic areas and focus on targets outside of our proprietary research programs. Our collaborators include Amgen, AstraZeneca, Eli Lilly and Company, Hoffman-La Roche Inc., ICOS Corporation, InterMune, Inc., Japan Tobacco Inc., Procter & Gamble Pharmaceuticals, QLT Inc., Takeda Chemical Industries, Ltd. and Trimeris, Inc. Today, these collaborations include 14 programs ongoing in our laboratories for

screening, lead generation, lead optimization or preclinical research. In addition, we have delivered lead compounds on 13 programs to our collaborators for further lead optimization, clinical candidates on ten programs for preclinical development and one program, IC-485 (PDE4), which ICOS has advanced to Phase II clinical testing.

Through our collaborations, we receive research funding and, in a number of our current agreements, up-front fees, milestone payments upon achievement of certain drug discovery objectives and/or royalties based upon sales of products commercialized by our collaborators as a result of these agreements. We also sell or license research tools, including our Optimer® building blocks and our Lead Generation Libraries, on a non-exclusive basis to multiple collaborators.

Array's Research and Development Technologies and Expertise

Our scientists use the Array Discovery Platform, an integrated suite of drug discovery technologies, to create drug candidates and conduct preclinical and clinical development. A critical capability within the Array Discovery Platform is our proprietary computational software, which enables our scientists to share information across the company, analyze databases of existing drugs, generate novel predictive databases and design novel drugs with potential competitive advantages over current therapies. We use *in vitro* and *in vivo* predictive pharmacodynamic and pharmacokinetic models to select compounds for potential development. Early in the drug discovery process, our scientists engineer into a drug candidate desirable drug characteristics, such as improved potency, specificity and dosing regimen and reduced side effect profile. The resulting compounds are tested for safety, efficacy and metabolism to select the most promising clinical candidates. We believe our drug discovery approach can significantly improve on the industry's existing clinical attrition rates through our use of:

> Proprietary chemoinformatic databases that relate chemical structure to compound development potential;

> Multiple lead generation strategies including high throughput screening of our lead generation library of up to 400,000 compounds, virtual screening and proprietary *de novo* design software;

> State-of-the-art protein x-ray crystallography, structural databases and computational modeling;

> An extensive battery of *in vivo* and *in vitro* metabolic and safety drug profiling assays; and

> A company-wide electronic laboratory notebook that enables our scientists to collect, analyze and share information across the organization.

OUR STRATEGY

We believe the Array Discovery Platform enables us to efficiently invent quality drug candidates, positioning us to capitalize on opportunities to commercialize or out-license our proprietary programs and to collaborate with pharmaceutical and biotechnology companies. We intend to increase the value of proprietary drug candidates by progressing them further through clinical development before seeking out-licensing partners or commercializing them ourselves.

Our goal is to be the most efficient inventor of therapeutic products by:

> Filling our proprietary development pipeline with high quality drug candidates primarily targeting large markets with significant unmet medical needs;

> Creating drug candidates in collaboration with leading pharmaceutical and biotechnology companies, where we receive research funding and share in the success we create through potential milestone and/or royalty payments; and

> Enhancing the Array Discovery Platform by developing proprietary tools, implementing novel technologies and continuing to hire scientists with proven success in drug discovery.

OUR CORPORATE INFORMATION

Founded in 1998, we are headquartered in Boulder, Colorado and employ over 250 employees, including 190 scientists, housed in 154,000 square feet of laboratory facilities. We became a public company in November 2000, and our stock is listed on the Nasdaq National Market under the symbol "ARRY". The mailing address and telephone number of our principal executive offices are 3200 Walnut Street, Boulder, Colorado 80301, (303) 381-6600.

The offering

Common stock we are offering	6,000,000 shares
Common stock to be outstanding after this offering	34,983,894 shares
Use of proceeds	We intend to use the net proceeds of this offering to fund our research and development efforts, including clinical trials, and for general corporate purposes, including working capital. See "Use of proceeds".
Nasdaq National Market Symbol	ARRY

The number of shares of our common stock to be outstanding after this offering is based on 28,983,894 shares of common stock outstanding as of November 1, 2004 and excludes:

- 6,784,503 shares issuable upon exercise of options outstanding as of November 1, 2004 at a weighted average exercise price of $6.36 per share, of which 3,628,425 were exercisable at November 1, 2004;
- 1,275,163 shares of common stock available for future issuance under our stock option plan; and
- 297,611 shares of common stock available for future issuance under our employee stock purchase plan.

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise of the underwriters' over-allotment option to purchase 900,000 additional shares of our common stock.

Summary financial data

The tables below present summary statement of operations and balance sheet data. The summary financial data for the years ended June 30, 2002, June 30, 2003 and June 30, 2004 are derived from our audited financial statements for those periods. We derived the summary financial data as of September 30, 2004 and for the three months ended September 30, 2003 and 2004 from our unaudited financial statements. The unaudited financial statement data includes, in our opinion, all adjustments (consisting only of normal recurring adjustments) that are necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the three months ended September 30, 2004 are not necessarily indicative of the results that may be expected for the fiscal year ending June 30, 2005. The as adjusted balance sheet data gives effect to the issuance and sale by us of 6,000,000 shares of our common stock in this offering at an assumed offering price of $8.46 per share, the closing price of our common stock on November 26, 2004, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. This information is only a summary and should be read in conjunction with our historical financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in our periodic reports on file with the SEC and incorporated by reference in this prospectus supplement and the accompanying prospectus.

	Years ended June 30,			Three months ended September 30,	
Statement of operations data:					

	Years ended June 30,			Three months ended September 30,	
	2002	2003	2004	2003	2004
				(unaudited)	
	(in thousands, except per share data)				
Revenue:					
Collaboration revenue	$ 33,854	$ 33,634	$ 28,186	$ 7,010	$ 7,345
License and milestone revenue	1,235	1,492	6,645	185	2,512
Total revenue	35,089	35,125	34,831	7,195	9,857
Operating expenses:					
Cost of revenue, including related research and development	28,641	34,952	37,019	7,252	8,793
Research and development for proprietary drug discovery	5,509	11,175	15,728	4,032	4,482
General and administrative expenses	6,903	8,859	7,969	1,940	2,335
Total operating expenses	41,053	54,986	60,716	13,224	15,610
Loss from operations	(5,964)	(19,861)	(25,885)	(6,029)	(5,753)
Interest income	1,483	787	381	92	138
Loss on investment		500			
Net loss	$ (4,481)	$ (19,574)	$ (25,504)	$ (5,937)	$ (5,615)
Basic and diluted net loss per share	$ (0.18)	$ (0.70)	$ (0.89)	$ (0.21)	$ (0.19)
Number of shares used to compute per share data	24,920	27,830	28,511	28,261	28,907

	As of September 30, 2004	
	Actual	As adjusted
Balance sheet data:		
	(unaudited, in thousands)	
Cash, cash equivalents and marketable securities	$ 32,035	$ 79,499
Working capital	19,305	66,769
Total assets	70,494	117,958
Accumulated deficit	(75,275)	(75,275)
Total stockholders' equity	50,624	98,088

Risk factors

Investment in our common stock involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, you should carefully consider the specific risks set forth below before making an investment decision. The risks and uncertainties described below could adversely affect our business, operating results and financial condition, as well as cause the value of our common stock to decline. You may lose all or part of your investment as a result. You should also refer to the other information contained in this prospectus supplement and the accompanying prospectus or incorporated by reference, including our financial statements and the notes to those statements, and the information set forth under the caption "Forward-looking statements".

RISKS RELATED TO OUR BUSINESS

We have a history of losses and may not achieve or sustain profitability.

We are at an early stage of executing our business plan, and we have a limited history of developing and out-licensing our proprietary drug candidates and offering our drug discovery capabilities. We have incurred significant operating and net losses and negative cash flows from operations since our inception. As of September 30, 2004, we had an accumulated deficit of $75.3 million. We had net losses of $4.5 million, $19.6 million and $25.5 million for the fiscal years ended June 30, 2002, 2003 and 2004, respectively, and of $5.6 million for the first three months of fiscal year 2005. We expect to incur additional losses and negative cash flows in the future, and these losses may continue or increase due in part to anticipated increases in expenses for research and development, expansion of our scientific capabilities, acquisitions of complementary technologies or in-licensed drug candidates and possible reductions in revenue from drug discovery collaborations. We may not be able to achieve or maintain profitability. Moreover, if we do achieve profitability, the level of any profitability cannot be predicted and may vary significantly.

Much of our current revenue is non-recurring in nature and unpredictable as to timing and amount. While several of our out-license and collaboration agreements provide for royalties on product sales, given that none of our drug candidates have been approved for commercial sale, our drug candidates are at early stages of development and that drug development entails a high risk of failure, we do not expect to receive any royalty revenue for several years, if at all. For the same reasons, we may never realize much of the milestone revenue provided for in our out-license and collaboration agreements. In addition, we have been devoting more resources to drug discovery and our proprietary drug programs. As a result, we expect that revenue from the sale of our research tools and services will continue to decline as a percentage of total revenue and that our research and development and other expenses will continue to increase.

Our drug candidates are at early stages of development, and we may not successfully develop a drug candidate that becomes a commercially viable drug.

The drug discovery and development process is highly uncertain, and we have not developed, and may never develop, a drug candidate that ultimately leads to a commercially viable drug. All of our drug candidates are in the early stages of development, and we do not have any drugs approved for commercial sale. Before a drug product is approved by the FDA for commercial marketing, it is tested for safety and effectiveness in clinical trials that can take up to six years or longer. At any time, a clinical trial can be placed on "clinical hold", or temporarily or permanently stopped for a variety of reasons, principally for safety concerns. Only one of our candidates, ARRY-142886, is in clinical

development, and it has only in the last six months entered a Phase I clinical trial. Candidates that appear promising in pre-clinical or clinical trials may fail to become marketed drugs for a number of reasons, including:

- the failure to achieve clinical trial results that indicate a candidate is effective in treating a specified condition or illness in humans;
- the presence of harmful side effects;
- the failure to obtain FDA or other regulatory approval;

- the lack of commercial viability of the drug;
- the failure to acquire, on reasonable terms, intellectual property rights necessary for commercialization; and
- the existence of therapeutics that are more effective or economical to produce.

At any time, we or our collaborators may decide to discontinue the development of a drug candidate or not to commercialize a candidate. Even if one of our drug candidates receives regulatory approval for marketing, physicians or consumers may not find that its effectiveness, ease of use, side effect profile, cost or other factors make it effective in treating disease or more beneficial than or preferable to other drugs on the market. Additionally, health insurance plans or maintenance organizations may choose not to include the drug on their formulary list for reimbursement. As a result, the drug may not be used or may be used only for restricted applications.

Our business depends on the extent to which the pharmaceutical and biotechnology industries in-license drug candidates to fill their product pipelines and collaborate with other companies for one or more aspects of their drug discovery process.

We are highly dependent on pharmaceutical and biotechnology companies continuing to in-license drug candidates to fill their clinical development pipelines and to collaborate with outside companies to obtain drug discovery expertise, and on their willingness to spend significant funds on research and development. Our capabilities include aspects of the drug discovery process that pharmaceutical and biotechnology companies have traditionally performed internally. The willingness of these companies to in-license drug candidates and to expand or continue drug discovery collaborations to enhance their research and development process is based on several factors that are beyond our control. These include their ability to hire and retain qualified scientists, the resources available for entering into drug discovery collaborations and the spending priorities among various types of research activities. Any of these factors could cause our revenue to decline. In addition, our ability to convince these companies to in-license our drug candidates or programs or to use our drug discovery capabilities, rather than develop them internally, will depend on many factors, including our ability to:

- discover competitive drug candidates targeting large market opportunities;
- develop and implement drug discovery technologies that will result in the identification of higher-quality drug candidates;
- attract and retain experienced, high caliber scientists;
- achieve timely, high quality results at an acceptable cost; and
- design, create and manufacture our chemical compounds in quantities, at purity levels and at costs that are acceptable to our collaborators.

The importance of these factors varies depending on the company and type of discovery program, and although we believe we currently address many of these factors, we may be unable to meet any or all of them in the future. Even if we are able to address these factors, these companies may still decide to perform these activities internally, acquire companies to fill their product pipelines, such as the recent acquisition by Amgen Inc. of Tularik, Inc., or retain other companies that provide drug research and development expertise similar to ours.

We may not be successful in entering into additional out-license agreements on favorable terms.

We are committing significant resources to create our own proprietary drug candidates. In fiscal 2004, we increased our investment in proprietary research to $15.7 million compared to $11.2 million for fiscal 2003, and for the three months ended September 30, 2004 our spending in this area increased to $4.5 million compared to $4.0 million for the three months ended September 30, 2003. Our proprietary drug discovery programs are in their early stage of development and are unproven. To date, we have entered into three out-licensing agreements for the co-development and commercialization of our drug candidates. Although we have expended, and continue to expend, resources on internal research and development for our proprietary programs and for our collaborators, we may not be successful in creating valuable proprietary drug

candidates that would enable us to form additional collaborations with favorable terms that include upfront, milestone, royalty and/or license payments. If we are unsuccessful in establishing favorable collaborations in the future, we may undertake and fund further development, clinical trials, manufacturing and marketing activities solely at our expense. As a result, our requirements for capital, which may not be available on favorable terms, could increase significantly, or we may be required to substantially reduce our development efforts, which would delay the commercialization of our drug candidates.

We may not out-license our proprietary programs at the most appropriate time to maximize the total value or return of these programs to us.

A critical aspect of our business strategy is to out-license drug candidates for late-stage co-development and commercialization of our drug candidates to obtain the highest possible value while also evaluating earlier out-licensing opportunities to maximize our risk-adjusted return on our investment in proprietary research. Because the costs and risk of failure of bringing a drug to market are high, the value of out-licensing a drug candidate generally increases as it successfully progresses through clinical trials. Array may choose or be forced to out-license a drug candidate or program at a point in the research and development process that does not provide as great a value or return than what might have been obtained if we had further developed the candidate or program internally. Likewise, we may decline, or be unable to obtain favorable, early out-licensing opportunities in programs that do not result in a commercially viable drug, which could leave the resulting program with little or no value even though significant resources were invested in its development.

Our collaborators have substantial control and discretion over the timing and the continued development and marketing of drug candidates we create.

Our collaborators have significant discretion in determining the efforts and amount of resources that they dedicate to our collaborations. Our collaborators may determine not to proceed with clinical development or commercialization of a particular drug candidate for a number of reasons that are beyond our control, even under circumstances where we might have continued such a program. In addition, our ability to generate milestone payments and royalties from our collaborators depends on our collaborators' abilities to establish the safety and efficacy of our drug candidates, obtain regulatory

approvals and achieve market acceptance of products developed from our drug candidates. We also depend on our collaborators to manufacture clinical scale quantities of some of our drug candidates and would depend on them in the future for commercial scale manufacture, distribution and direct sales. Our collaborators may not be successful in manufacturing our drug candidates on a commercial scale or in successfully commercializing them.

We face additional risks in connection with our collaborations, including the following:

- our collaborators may develop and commercialize, either alone or with others, products and services that are similar to or competitive with the products that are the subject of the collaboration with us;
- collaborators may underfund or not commit sufficient resources to the testing, marketing, distribution or other development of our drug candidates;
- our collaborators may not properly maintain or defend our intellectual property rights or they may utilize our proprietary information in such a way as to invite litigation that could jeopardize or potentially invalidate our proprietary information or expose us to potential liability;
- our collaborators may encounter conflicts of interest, changes in business strategy or other business issues which could adversely affect their willingness or ability to fulfill their obligations to us (for example, pharmaceutical and biotechnology companies historically have re-evaluated their priorities following mergers and consolidations, which have been common in recent years in these industries); and
- disputes may arise between us and our collaborators delaying or terminating the research, development or commercialization of our drug candidates, resulting in significant litigation or arbitration that could be time-consuming and expensive, or causing collaborators

to act in their own self-interest and not in the interest of our stockholders.

The sale and manufacture of drug candidates that we develop with our collaborators or on our own may not receive regulatory approval.

The development and commercialization of drug candidates for our collaborators and our own internal drug discovery efforts are subject to regulation. Pharmaceutical products require lengthy and costly testing in animals and humans and regulatory approval by governmental agencies prior to commercialization. It takes several years to complete testing, and failure can occur at any stage of testing. Results attained in preclinical testing and early clinical trials for any of our drug candidates may not be indicative of results that are obtained in later studies, and significant setbacks in advanced clinical trials may arise, even after promising results in earlier studies. Clinical trials may not demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals or result in marketable products. Based on results at any stage of testing, we or our collaborators may decide to repeat or redesign a trial or discontinue development of a drug candidate.

Approval of a drug candidate as safe and effective for use in humans is never certain, and regulatory agencies may delay or deny approval of drug candidates for commercialization. These agencies may also delay or deny approval based on additional government regulation or administrative action or on changes in regulatory policy during the period of clinical trials in humans and regulatory review. Similar delays and denials may be encountered in foreign countries. None of our collaborators have obtained regulatory approval to manufacture and sell drug candidates owned by us or identified or developed under an agreement with us. If we or our collaborators cannot obtain this approval, we will not realize milestone or royalty payments based on commercialization goals for these drug candidates.

Even if our drug candidates obtain regulatory approval, we and our collaborators will be subject to ongoing government regulation.

Even if regulatory authorities approve any of our drug candidates, the manufacture, marketing and sale of these drugs will be subject to strict and ongoing regulation. Compliance with this regulation consumes substantial financial and management resources and may expose us and our collaborators to the potential for other adverse circumstances. For example, approval for a drug may be conditioned on costly post-marketing follow-up studies. Based on these studies, if a regulatory authority does not believe that the drug demonstrates a clinical benefit to patients, it could limit the indications for which a drug may be sold or revoke the drug's marketing approval. In addition, identification of certain side effects after a drug is on the market may result in the subsequent withdrawal of approval, reformulation of a drug, additional preclinical and clinical trials and changes in labeling. Any of these events could delay or prevent us from generating revenue from the commercialization of these drugs and cause us to incur significant additional costs.

In addition, the marketing of these drugs by us or our collaborators will be regulated by federal and state laws pertaining to health care "fraud and abuse," such as the federal anti-kickback law prohibiting bribes, kickbacks or other remuneration for the order or recommendation of items or services reimbursed by federal health care programs. Many states have similar laws applicable to items or services reimbursed by commercial insurers. Violations of fraud and abuse laws can result in fines and/or imprisonment.

If our drug candidates do not gain market acceptance, we may be unable to generate significant revenue.

Even if our drug candidates are approved for sale, they may not be successful in the marketplace. Market acceptance of any of our drug candidates will depend on a number of factors including:

> demonstration of clinical effectiveness and safety;

> the potential advantages of our drug candidates over alternative treatments;

> the availability of adequate third-party reimbursement; and

> the effectiveness of marketing and distribution methods for the products.

If our drug candidates do not gain market acceptance among physicians, patients and others in the medical community, our ability to generate meaningful revenues from our drug candidates would be limited.

If we need but are unable to obtain additional funding to support our operations, we could experience a reduction in our ability to expand or be forced to reduce our operations.

We have historically financed our operations in substantial part through the sale of our securities and revenue from our collaborators. We generated $5.5 million from our operating activities for the fiscal year ended June 30, 2004; we used $17.6 million for the fiscal year ended June 30, 2003 and generated $1.4 million for the fiscal year ended June 30, 2002. During the three-month period ended September 30, 2004, we used $4.8 million. Although we anticipate that we will use more cash in our operating activities in future periods, we believe that our existing cash, cash equivalents and marketable securities and anticipated cash flow from existing out-license and collaboration agreements together with the proceeds of this public offering will be sufficient to support our current operating

plan for at least the next 12 months. However, our current operating plan could change as a result of many factors, and we could require additional funding sooner than anticipated.

To the extent that the cash from our future operating activities is insufficient to meet our future capital requirements, we will have to raise additional funds to continue our proprietary research and development. We may not be able to raise funds on favorable terms, if at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the issuance of those securities would result in dilution to our stockholders. Moreover, incurring debt financing could result in a substantial portion of our operating cash flow being dedicated to the payment of principal and interest on such indebtedness, could render us more vulnerable to competitive pressures and economic downturns and could impose restrictions on our operations. If adequate funds are not available, we may be required to curtail operations significantly or to obtain funds through other arrangements on unattractive terms.

We have limited clinical development and commercialization experience.

One of our business strategies is to develop select drug candidates through later stage clinical trials before out-licensing them to a pharmaceutical or biotechnology partner for further clinical development and commercialization. To date, we have filed one IND and initiated one Phase I clinical trial, and we have not yet conducted a Phase II or later stage clinical trial, nor commercialized a drug. We have limited experience conducting clinical trials and obtaining regulatory approvals, and we may not be successful in some or all of these activities. In the future, we may be forced to rely on third-party clinical investigators, clinical research or marketing organizations, which could subject us to delays that are outside our control.

Our research and development capabilities may not produce viable drug candidates.

We have entered into several research and development collaborations under which we provide drug discovery services to identify drug candidates for our collaborators using the Array Discovery Platform. We also seek to identify and develop drug candidates for our proprietary programs. It is uncertain whether we will be able to provide drug discovery more efficiently or create high quality drug candidates that are suitable for our or our collaborators' purposes. Our ability to create viable drug candidates depends on many factors, including the implementation of appropriate technologies, the development of effective new research tools and the performance and decision-making capabilities of our scientists. Our information-driven technology platform, which we believe allows our scientists to make better decisions, may not enable our scientists to make correct decisions or develop viable drug candidates.

If our drug discovery and development programs do not progress as anticipated, our revenue and stock price could be negatively impacted.

We estimate the timing of a variety of preclinical, clinical, regulatory and other milestones for planning purposes, including when a drug candidate is expected to enter clinical trials, when a clinical trial will be completed or when an application for regulatory approval will be filed. Some of our estimates are included in this prospectus. We base our estimates on facts that are currently known to us and on a variety of assumptions, many of which are beyond our control. Delays may be caused by regulatory or patent issues, interim or final results of on-going clinical trials, scheduling conflicts with participating clinics and the rate of patient enrollment in clinical trials. If we or our collaborators do not achieve milestones when anticipated, we may not achieve our planned revenue, and our stock price could decline.

Because we rely on a small number of collaborators for a significant portion of our revenue, if one or more of our major collaborators terminates or reduces the scope of their agreement with us, our revenue may significantly decrease.

A relatively small number of collaborators account for a significant portion of our revenue. AstraZeneca, Genentech and Eli Lilly accounted for 18%, 13% and 12%, respectively, of our total revenue for the fiscal year ended June 30, 2004. During the fiscal year ended June 30, 2003, revenue from ICOS, Merck and Eli Lilly accounted for 21%, 15% and 12%, respectively, of our total revenue. Our agreement with Merck and the research portion of our agreements with ICOS concluded as of December 31, 2003, and our agreement with Eli Lilly terminates in March 2005, or earlier upon payment of a termination fee. We expect that revenue from a limited number of collaborators, including AstraZeneca and Genentech, will account for a large portion of our revenue in future quarters. In general, our collaborators may terminate their contracts with us upon 30 to 90 days' notice for a number of reasons or, in some cases, for no reason. In addition, some of our major collaborators can determine the amount of products delivered and research or development performed under these agreements. As a result, if any one of our major collaborators cancels, declines to renew or reduces the scope of its contract with us, our revenue may decrease.

We expect that revenue from our research tools will decline as a percentage of our total revenue in the future as we focus more resources on our proprietary research programs.

We expect that revenue from our research tools, such as Optimer Building Blocks, Lead Generation Libraries and custom synthesis, will decline as a percentage of our total revenue in the future as we focus greater resources on drug discovery programs. We also face greater competition for these tools and services, particularly from foreign chemistry service providers that have made progress in recent years in obtaining significant contracts to provide customer designed custom screening library compounds to major pharmaceutical companies due to significantly lower cost structures. As a result of this competition, our collaborators may decide to fulfill some or all of their needs through other providers or internally. In light of these changes in market conditions and our expectation that future revenue for our Lead Generation Libraries and Optimer building blocks will decline, we reduced the carrying values for our inventories. We increased the inventory reserves during fiscal 2003 and fiscal 2004, resulting in non-cash charges of $4.1 million and $5.6 million, respectively. We perform periodic reviews and, when required, write down our inventories for non-marketability when the cost of inventory exceeds the estimated market value based upon assumptions about future demand and market conditions. If future market conditions are less favorable than projected, we may determine that further increases in our inventory reserves are necessary. As of September 30, 2004 we had $701,000 and $802,000 in inventory, net of reserves, related to Lead Generation Libraries and Optimer building blocks, respectively.

We may not be able to recruit and retain the experienced scientists and management we need to compete in the drug research and development industry.

We have 251 employees as of November 15, 2004, and our future success depends upon our ability to attract, retain and motivate highly skilled scientists and management. Our ability to attract new collaborators and retain, renew and expand existing collaborations depends on our ability to hire and retain scientists with the skills necessary to provide appropriate drug discovery expertise. We compete with pharmaceutical and biotechnology companies, contract research companies and academic and research institutions to recruit scientists. We may not be successful in attracting new scientists or management or in retaining or motivating our existing personnel.

Our future success also depends on the personal efforts and abilities of the principal members of our senior management and scientific staff to provide strategic direction, manage our operations and maintain a cohesive and stable environment. In particular, we rely on the services of Robert E. Conway, our Chief Executive Officer; Dr. Kevin Koch, our President and Chief Scientific Officer; Dr. David L. Snitman, our Chief Operating Officer and Vice President, Business Development; Dr. Anthony D. Piscopio, our Vice President, Chemistry and Director of Process Chemistry; R. Michael Carruthers, our Chief Financial Officer; and John R. Moore, our Vice President and General Counsel. We have employment agreements with all of the above personnel that are terminable upon 30 days' prior notice. If we cannot attract and retain qualified scientists and management, we will not be able to continue to provide or expand our drug discovery offerings.

We may not be able to meet the delivery and performance requirements set forth in our collaboration agreements.

In order to maintain our current collaborative relationships and to meet the performance and delivery requirements in our agreements, we must be able to provide drug discovery capabilities at appropriate levels, with acceptable quality and at an acceptable cost. Our ability to deliver the drug discovery capabilities we offer to our collaborators is limited by many factors, including the difficulty of the chemistry and biology, the lack of predictability in the scientific process and having adequate scientific expertise. The inability to meet our existing or future contractual commitments may result in delayed or lost revenue, loss of collaborators or failure to expand our existing relationships.

Our quarterly operating results could fluctuate significantly.

Entering into drug discovery collaborations typically involves significant technical evaluation and/or commitment of capital by our collaborators. Accordingly, negotiation can be lengthy and is subject to a number of significant risks, including collaborators' budgetary constraints and internal acceptance reviews. In addition, some of our collaborators can influence when we deliver products and perform services under their contracts with us. Due to these factors, our operating results could fluctuate significantly from quarter to quarter. In addition, we may experience significant fluctuations in quarterly operating results due to factors such as general and industry-specific economic conditions that may affect the research and development expenditures of pharmaceutical and biotechnology companies.

Due to the possibility of fluctuations in our revenue and expenses, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. Our operating results in some quarters may not meet the expectations of stock market analysts and investors. If we do not meet analysts' and/or investors' expectations, our stock price could decline.

Our cGMP and pharmacology facilities and practices may fail to comply with government regulations.

All facilities and manufacturing processes used in the production of Active Pharmaceutical Ingredients for clinical use in the United States must be operated in conformity with current Good Manufacturing Practices (cGMP), as established by the FDA. We operate a clinical-scale manufacturing facility that we believe conforms with cGMP requirements. This facility and our cGMP practices are subject to periodic regulatory inspections to ensure compliance with cGMP requirements. In addition, we could be required to comply with specific requirements of our collaborators, which may exceed FDA requirements. Failure on our part to comply with applicable regulations and specific requirements of our collaborators could result in the termination of ongoing research or the disqualification of data for submission to regulatory authorities. Material violations of cGMP requirements could result in

additional regulatory sanctions and, in severe cases, could result in a mandated closing of our cGMP facility.

In addition, our pharmacology facility may be subject to the United States Department of Agriculture (USDA) regulations for certain animal species. Failure on our part to comply with applicable regulations and specific requirements of our collaborators could result in the termination of ongoing pharmacology research. Material violations of USDA requirements could result in additional regulatory sanctions and, in severe cases, could result in a mandated closing of our pharmacology facility for certain species.

Our development, testing and manufacture of drug candidates may expose us to product liability lawsuits.

We develop, test and manufacture drug candidates that are generally intended for use in humans. Our drug discovery activities that result in the future manufacture and sale of drugs by our collaborators expose us to the risk of liability for personal injury or death to persons using these drugs. We may be required to pay substantial damages or incur legal costs in connection with defending any of these product liability claims, or we may not receive revenue from expected royalty or milestone payments if the commercialization of a drug is limited or ceases as a result of such claims. We have product liability insurance that contains customary exclusions and provides coverage up to $3.0 million per occurrence and in the aggregate, which we believe is customary in our industry. However, our product liability insurance does not cover every type of product liability claim that we may face or loss we may incur, and may not adequately compensate us for the entire amount of covered claims or losses or for the harm to our business reputation. We may be unable to acquire or maintain additional or maintain our current insurance policies at acceptable costs or at all.

If our use of chemical and hazardous materials violates applicable laws or regulations or causes personal injury we may be liable for damages.

Our drug discovery activities, including the analysis and synthesis of chemical compounds, involve the controlled use of chemicals, including flammable, combustible, toxic and radioactive materials that are potentially hazardous. Our use, storage, handling and disposal of these materials is subject to federal, state and local laws and regulations, including the Resource Conservation and Recovery Act, the Occupational Safety and Health Act and local fire codes, and regulations promulgated by the Department of Transportation, the Drug Enforcement Agency, the Department of Energy, the Colorado Department of Public Health and Environment, and the Colorado Department of Human Services, Alcohol and Drug Abuse Division. We may incur significant costs to comply with these laws and regulations in the future. In addition, we cannot completely eliminate the risk of accidental contamination or injury from these materials, which could result in material unanticipated expenses, such as substantial fines or penalties, remediation costs or damages, or the loss of a permit or other authorization to operate or engage in our business. Those expenses could exceed our net worth and limit our ability to raise additional capital.

Our operations could be interrupted by damage to our specialized laboratory facilities.

Our operations are dependent upon the continued use of our highly specialized laboratories and equipment in Boulder and Longmont, Colorado. Catastrophic events, including fires or explosions, could damage our laboratories, equipment, scientific data, work in progress or inventories of chemical compounds and may materially interrupt our business. We employ safety precautions in our laboratory activities in order to reduce the likelihood of the occurrence of these catastrophic events; however, we

cannot eliminate the chance that such an event will occur. The availability of laboratory space in these locations is limited, and rebuilding our facilities could be time consuming and result in substantial delays in fulfilling our agreements with our collaborators. We maintain business interruption insurance in the amount of $18.0 million to cover continuing expenses and lost revenue caused by such occurrences. However, this insurance does not compensate us for the loss of opportunity and potential harm to customer relations that our inability to meet our collaborators' needs in a timely manner could create.

RISKS RELATED TO OUR INDUSTRY

The concentration of the pharmaceutical and biotechnology industry and any further consolidation could reduce the number of our potential collaborators.

There are a limited number of pharmaceutical and biotechnology companies, and these companies represent a significant portion of the market for our capabilities. The number of our potential collaborators could decline even further through consolidation among these companies. If the number of our potential collaborators declines even further, they may be able to negotiate greater rights to intellectual property they license from us, price discounts or other terms that are unfavorable to us.

Capital market conditions may reduce our biotechnology collaborators' ability to fund research.

Traditionally, many unprofitable biotechnology companies have funded their research and development expenditures through raising capital in the equity markets. Declines and uncertainties in these markets have severely restricted raising new capital at times in the past and have affected these companies' ability to continue to expand or fund existing research and development efforts. If our current or future biotechnology collaborators are unable to raise sufficient capital to fund research and development expenditures, we may not be able to expand or maintain current revenue.

Health care reform and cost control initiatives by third-party payors could reduce the prices that can be charged for drugs, which could limit the commercial success of our drug candidates.

The commercial success of our drug candidates will depend significantly on the availability of reimbursement to the patient from third party payors, such as the government and private insurance plans. In the United States, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 adds prescription drug coverage to Medicare beginning in 2006 and a voluntary drug discount card for Medicare beneficiaries effective in June 2004. However, future legislation may limit the prices that can be charged for drugs we develop and may limit our commercial opportunity and reduce any associated revenue and profits. For example, federal laws require drug manufacturers to pay specified rebates for medicines reimbursed by Medicaid and to provide discounts for outpatient medicines purchased by certain public health service entities and "disproportionate share" hospitals and for purchases by some federal governmental departments such as the Department of Veterans Affairs and the Department of Defense. In some countries other than the United States, pricing and profitability of prescription pharmaceuticals and biopharmaceuticals are subject to government control. Also, we expect managed care will continue to put pressure on the pricing of pharmaceutical and biopharmaceutical products. Cost control initiatives could decrease the price that we or any potential collaborators receive for any of our future products, which could adversely affect our profitability. These initiatives may also have the effect of reducing the resources that pharmaceutical and

biotechnology companies can devote to in-licensing drug candidates and the research and development of new drugs, which could reduce our resulting revenue.

We or our collaborators may not obtain favorable reimbursement rates for our drug candidates.

Third party payors, such as government and private insurance plans, frequently require companies to provide predetermined discounts from list prices and are increasingly challenging the prices charged for pharmaceuticals and other medical products. Our products may not be considered cost-effective, and reimbursement to the patient may not be available or be sufficient to allow the sale of our products on a competitive basis. We or our collaborators may not be able to negotiate favorable reimbursement rates for our products. If we or our collaborators fail to obtain an adequate level of reimbursement for our products by third-party payors, sales of the drugs would be adversely affected or there may be no commercially viable market for the products.

The drug research and development industry has a history of patent and other intellectual property litigation, and we may be involved in costly intellectual property lawsuits.

The drug research and development industry has a history of patent and other intellectual property litigation, and we believe these lawsuits are likely to continue. Legal proceedings relating to intellectual property would be expensive, take significant time and divert management's attention from other business concerns. Because we produce drug candidates for a broad range of therapeutic areas and provide many different capabilities in this industry, we face potential patent infringement suits by companies that control patents for similar drug candidates or capabilities or other suits alleging infringement of their intellectual property rights. There could be issued patents of which we are not aware that our products infringe or patents that we believe we do not infringe that we are ultimately found to infringe. Moreover, patent applications are in many cases maintained in secrecy until patents are issued. The publication of discoveries in the scientific or patent literature frequently occurs substantially later than the date on which the underlying discoveries were made and patent applications were filed. Because patent applications can take many years to issue, there may be currently pending applications of which we are unaware that may later result in issued patents that we infringe with our products. In addition, technology created under our research and development collaborations may infringe the intellectual property rights of third parties, in which case we may not receive milestone or royalty revenue from those collaborations.

If we do not prevail in an infringement lawsuit brought against us, we might have to pay substantial damages, including triple damages, and we could be required to stop the infringing activity or obtain a license to use the patented technology or redesign our products so as not to infringe the patent. We may not be able to enter into licensing arrangements at a reasonable cost or effectively redesign our products. Any inability to secure licenses or alternative technology could delay the introduction of our products or prevent us from manufacturing or selling products.

The intellectual property rights we rely on to protect our proprietary drug candidates and the technology underlying our tools and techniques may be inadequate to prevent third parties from using our technology or developing competing capabilities or to protect our interests in our proprietary drug candidates.

Our success will depend in part on our ability to protect patents and maintain the secrecy of proprietary processes and other technologies we develop for the testing and synthesis of chemical compounds in the drug discovery process. In addition, one of our business strategies is to develop our

own proprietary drug candidates and enter into collaborations with pharmaceutical and biotechnology companies for the development of these drug candidates. In order to protect our rights to our proprietary drug candidates, we must obtain and maintain the intellectual property rights to such drug candidates. We currently have six issued United States patents and 34 active patent applications on file with the United States Patent and Trademark Office. We have 15 active international patent applications and 84 active patent applications filed in foreign countries that correspond to U.S. patents or patent applications.

Any patents that we may own or license now or in the future may not afford meaningful protection for our drug candidates or our technology and tools. In order to protect or enforce our intellectual property rights, we may have to initiate legal proceedings against third parties. Our efforts to enforce and maintain our intellectual property rights may not be successful and may result in substantial costs and diversion of management time. In addition, other companies may challenge our patents and, as a result, these patents could be narrowed, invalidated or rendered unenforceable, or we may be forced to stop using the technology covered by these patents or to license the technology from third parties. In addition, current and future patent applications on which we depend may not result in the issuance of patents in the United States or foreign countries. Even if our rights are valid, enforceable and broad in scope, competitors may develop drug candidates or other products based on similar research or technology that is not covered by our patents.

Patent applications relating to or affecting our business may have been filed by a number of pharmaceutical and biopharmaceutical companies and academic institutions. A number of the technologies in these applications or patents may conflict with our technologies, patents or patent applications, which could reduce the scope of patent protection we could otherwise obtain. We could also become involved in interference

proceedings in connection with one or more of our patents or patent applications to determine priority of inventions. We cannot be certain that we are the first creator of inventions covered by pending patent applications, or that we were the first to file patent applications for any such inventions.

Drug candidates we develop that are approved for commercial marketing by the FDA would be subject to the provisions of the Drug Price Competition and Patent Term Restoration Act of 1984, known as the "Hatch-Waxman Act." The Hatch-Waxman Act provides companies with marketing exclusivity for varying time periods during which generic versions of a drug may not be marketed and allows companies to apply to extend patent protection for up to five additional years. It also provides a means for approving generic versions of a drug once the marketing exclusivity period has ended and all relevant patents have expired. The period of exclusive marketing, however, may be shortened if a patent is successfully challenged and defeated, which could reduce the amount of royalties we receive on the product.

Agreements we have with our employees, consultants and collaborators may not afford adequate protection for our trade secrets, confidential information and other proprietary information.

In addition to patent protection, we also rely on copyright and trademark protection, trade secrets, know-how, continuing technological innovation and licensing opportunities. In an effort to maintain the confidentiality and ownership of our trade secrets and proprietary information, we require our employees, consultants and advisors to execute confidentiality and proprietary information agreements. However, these agreements may not provide us with adequate protection against improper use or disclosure of confidential information and there may not be adequate remedies in the event of unauthorized use or disclosure. Furthermore, we may from time to time hire scientific personnel formerly employed by other companies involved in one or more areas similar to the activities we

conduct. In some situations, our confidentiality and proprietary information agreements may conflict with, or be subject to, the rights of third parties with whom our employees, consultants or advisors have prior employment or consulting relationships. Although we require our employees and consultants to maintain the confidentiality of all proprietary information of their previous employers, these individuals, or we, may be subject to allegations of trade secret misappropriation or other similar claims as a result of their prior affiliations. Finally, others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets. Our failure or inability to protect our proprietary information and techniques may inhibit or limit our ability to exclude certain competitors from the market.

The drug research and development industry is highly competitive, and we compete with some companies that offer a broader range of capabilities and have better access to resources than we do.

The pharmaceutical and biotechnology industries are characterized by rapid and continuous technological innovation. We compete with companies worldwide that are engaged in the research and discovery of drug candidates for licensing, co-development and commercialization, including Ariad Pharmaceuticals Inc; deCODE genetics Inc; Exelixis Inc; Gilead Sciences, Inc.; Theravance, Inc.; and Vertex Pharmaceuticals Incorporated. Some of our competitors have a broader range of capabilities and have greater access to financial, technical, scientific, business development, recruiting and other resources than we do. Their access to greater resources may allow them to develop processes or technologies that would render our technologies obsolete or uneconomical, or products that are more effective, safer or less costly than products we develop or for which they obtain FDA approval more rapidly than we do. We anticipate that we will face increased competition in the future as new companies enter the market and advanced technologies become available.

We face potential liability related to the privacy of health information we obtain from research institutions.

Most health care providers, including research institutions from whom we or our collaborators obtain patient information, are subject to privacy regulations promulgated under the Health Insurance Portability and Accountability Act of 1996, or HIPAA. Although we are not directly regulated by HIPAA, we could face substantial criminal penalties if we knowingly receive individually identifiable health information from a health care provider or research institution that has not satisfied HIPPA's disclosure standards. In addition, certain state privacy laws and genetic testing laws may apply directly to our operations and/or those of our collaborators and may impose restrictions on our use and dissemination of individuals' health information. Moreover, patients about whom we or our collaborators obtain information, as well as the providers who share this information with us, may have contractual rights that limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

RISKS RELATED TO OUR STOCK AND THE OFFERING

Our officers and directors have significant control over us and their interests may differ from those of our stockholders.

At September 30, 2004, our directors and officers beneficially owned or controlled approximately 18% of our common stock. Individually and in the aggregate, these stockholders significantly influence our

management, affairs and all matters requiring stockholder approval. These stockholders may vote their shares in a way with which other stockholders do not agree. In particular, this concentration of ownership may have the effect of delaying, deferring or preventing an acquisition of us or entrenching management and may adversely affect the market price of our common stock.

Because our stock price may be volatile, our stock price could experience substantial declines.

The market price of our common stock has historically experienced and may continue to experience volatility. The high and low bid prices for our common stock were $11.85 and $3.10, respectively, in fiscal 2004, and were $9.60 and $2.26, respectively, in fiscal 2003. Our quarterly operating results, the success or failure of our internal drug discovery efforts, changes in general conditions in the economy or the financial markets and other developments affecting our competitors or us could cause the market price of our common stock to fluctuate substantially. This volatility and market declines over the past several years have affected the market prices of securities issued by many companies, often for reasons unrelated to their operating performance and may adversely affect the price of our common stock. In the past, securities class action litigation has often been instituted following periods of volatility in the market price of a company's securities. A securities class action suit against us could result in potential liabilities, substantial costs and the diversion of management's attention and resources, regardless of whether we win or lose.

Because we do not intend to pay dividends, stockholders will benefit from an investment in our common stock only if it appreciates in value.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain our future earnings, if any, to finance the expansion of our business and do not expect to pay any cash dividends in the foreseeable future. As a result, the success of an investment in our common stock will depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

The ability of our stockholders to control our policies and effect a change of control of our company is limited, which may not be in the best interests of our stockholders.

There are provisions in our certificate of incorporation and bylaws that may discourage a third party from making a proposal to acquire us, even if some of our stockholders might consider the proposal to be in their best interests. These include the following provisions in our certificate of incorporation:

> Our certificate of incorporation provides for three classes of directors with the term of office of one class expiring each year, commonly referred to as a "staggered board." By preventing stockholders from voting on the election of more than one class of directors at any annual meeting of stockholders, this provision may have the effect of keeping the current members of our board of directors in control for a longer period of time than stockholders may desire.

> Our certificate of incorporation authorizes our board of directors to issue shares of preferred stock without stockholder approval and to establish the preferences and rights of any preferred stock issued, which would allow the board to issue one or more classes or series of preferred stock that could discourage or delay a tender offer or change in control.

In addition, our board of directors approved on August 2, 2001, a Rights Agreement, which could prevent or deter a potential unsolicited takeover of us by causing substantial dilution of an acquirer of 15% or more of our outstanding common stock. We are also subject to the business combination provisions of Section 203 of the Delaware General Corporation Law, which, in general, imposes

restrictions upon acquirers of 15% or more of our stock. As a result, it is difficult for a third party to acquire control of us without the approval of the board of directors and, therefore, mergers and acquisitions of us that our stockholders may consider in their best interests may not occur.

Future sales of our common stock may depress our stock price.

The market price of our common stock could decline as a result of sales of substantial amounts of our common stock in the public market after the closing of this offering, or the perception that these sales could occur. In addition, these factors could make it more difficult for us to raise funds through future offerings of common stock. There are 28,983,894 shares of common stock outstanding as of November 1, 2004. All of the shares sold in this offering will be freely transferable without restriction or further registration under the Securities Act of 1933.

We have an aggregate of approximately 3.4 million shares of common stock that have been registered or are freely tradeable under an exemption from registration and are reserved for issuance upon exercise of options granted or reserved for grant under our stock option plan and our employee stock purchase plan. Stockholders can sell these shares in the public market upon issuance, subject to restrictions under securities laws. The number of shares we have reserved for issuance under our stock option plan may increase based on our issued and outstanding shares of common stock and we may increase the number of shares reserved for issuance under our employee stock purchase plan. We may register such additional shares in the future. In addition, some of our existing stockholders will be entitled to register their shares of common stock after this offering.

New investors in our common stock will experience immediate and substantial dilution.

The offering price of our common stock will be substantially higher than what the net tangible book value per share of our common stock will be immediately after the offering. As a result, purchasers of our common stock in this offering will incur immediate and substantial dilution of $5.66 per share of common stock. Those purchasers will experience additional dilution upon the exercise of outstanding stock options having an exercise price less than the per share offering price to the public in this offering. See "Dilution" for a more detailed discussion of the dilution new investors will incur in this offering.

Management may invest or spend the proceeds of this offering in ways with which you may not agree and in ways that may not yield a return to our stockholders.

We will retain broad discretion over the use of proceeds from this offering. Stockholders may not deem such uses desirable, and our use of the proceeds may not yield a significant return or any return at all for our stockholders. We expect to use the net proceeds from this offering to fund our research and development efforts and for general corporate purposes, including working capital. A number of variables will influence our actual use of the proceeds from this offering, and our actual uses of the proceeds of this offering may vary substantially from our currently planned uses. Pending the use of the net proceeds, we intend to invest the net proceeds from this offering in investment grade, interest-bearing securities.

Forward-looking statements

This prospectus supplement and the accompanying prospectus contain and incorporate by reference certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements that are not descriptions of historical facts are forward-looking statements, based on management's estimates, assumptions and projections that are subject to risks and uncertainties. These statements can generally be identified by the use of forward-looking terminology such as "believes," "expects," "intends," "may," "will," "should," or "anticipates" or similar terminology.

These statements reflect our current views about future events and are subject to significant risks and uncertainties, including those discussed below and those described more fully in other reports filed by Array with the SEC. Because these statements reflect our current expectations concerning future events, our actual results could differ materially from those anticipated in these forward-looking statements. The factors that could cause actual results to differ from our expectations include, but are not limited to, our ability to achieve and maintain profitability, the extent to which the pharmaceutical and biotechnology industries are willing to in-license drug candidates for their product pipelines and to collaborate with and fund third parties for their drug discovery activities, our ability to out-license our proprietary candidates on favorable terms, our ability to continue to fund and successfully progress internal research efforts and to create effective, commercially viable drugs, risks associated with our dependence on our collaborators for the clinical development and commercialization of our out-licensed drug candidates, the ability of our collaborators and of Array to meet objectives, including clinical trials, tied to milestones and royalties, our ability to attract and retain experienced scientists and management, and the risk factors set forth under the caption "Risk Factors." The forward-looking statements contained herein represent our judgment as of the date of this prospectus supplement. We disclaim any intent or obligation to update any

forward-looking statement except to the extent required by law.

Use of proceeds

Based on an assumed offering price of $8.46 per share, we estimate that the net proceeds to us from this offering will be approximately $47.5 million (or approximately $54.6 million if the underwriters' over-allotment option is exercised in full), after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering to fund our research and development efforts, including clinical trials for our proprietary candidates, and for general corporate purposes, including working capital. We may also use a portion of the net proceeds to acquire or invest in complementary businesses, technologies, drugs, drug candidates or other intellectual property, although we have no present commitments or agreements to do so.

The amounts and timing of these expenditures will depend on a number of factors, such as the timing and progress of our research and development efforts, technological advances and the competitive environment for our drug candidates. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, we will retain broad discretion over the use of these proceeds. Pending these uses, we intend to invest the net proceeds in investment-grade, interest-bearing securities.

Capitalization

The following table shows our unaudited cash, cash equivalents and marketable securities and capitalization as of September 30, 2004:

- on an actual basis; and
- on an as adjusted basis to give effect to our sale of 6,000,000 shares of our common stock in this offering at an assumed public offering price of $8.46 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

This table should be read with "Management's discussion and analysis of financial condition and results of operations" and our financial statements and the related notes appearing in our most recent quarterly and annual reports, which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

	As of September 30, 2004	
	Actual	As adjusted
	(unaudited)	
	(in thousands, except share and per share data)	

	As of September 30, 2004	
Cash, cash equivalents and marketable securities(1)	$ 32,035	$ 79,499
Stockholders' equity:		
Preferred stock, par value $0.001 per share; 10,000,000 shares authorized; no shares issued and outstanding		
Common stock, par value $0.001 per share; 60,000,000 shares authorized; 28,978,298 shares issued and outstanding; 34,978,298 shares issued and outstanding, as adjusted	29	35
Additional paid-in-capital	125,955	173,413
Accumulated deficit	(75,275)	(75,275)
Accumulated other comprehensive loss	(85)	(85)
Total stockholders' equity	50,624	98,088
Total capitalization	$ 50,624	$ 98,088

(1) *Includes $2.0 million of restricted cash.*

The information in the table above excludes the following:

- 6,689,705 shares issuable upon exercise of options outstanding as of September 30, 2004 at a weighted average exercise price of $6.35 per share;
- 1,382,371 shares of common stock available for future issuance under our stock option plan as of September 30, 2004; and
- 297,611 shares of common stock available for future issuance under our employee stock purchase plan as of September 30, 2004.

Dilution

If you invest in our common stock, your interest will be diluted to the extent of the difference between the public offering price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value as of September 30, 2004, was $50.6 million, or $1.75 per share of common stock. Net tangible book value per share is calculated by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets of $0, and dividing this amount by the number of shares of common stock outstanding as of September 30, 2004. After giving effect to the sale by us of 6,000,000 shares of common stock offered in this offering at an assumed public offering price of $8.46 per share and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2004 would have been $98.1 million, or $2.80 per share of common stock. This represents an immediate increase in the net tangible book value of $1.05 per share to our existing stockholders and an immediate and substantial dilution in the net tangible book value of $5.66 per share of common stock to new investors. The following table illustrates this calculation on a per share basis:

Assumed public offering price per share	$ 8.46

Net tangible book value per share as of September 30, 2004	$ 1.75	
Increase per share attributable to new investors	1.05	
As adjusted net tangible book value per share after the offering		2.80
Dilution per share to new investors		5.66

The information in the foregoing table does not take into account further dilution to new investors that could occur upon the exercise of outstanding options having a per share exercise price less than the per share offering price to the public in this offering. As of September 30, 2004, there were 28,978,298 shares of common stock outstanding, which does not include:

- 6,689,705 shares issuable upon exercise of options outstanding at a weighted average exercise price of $6.35 per share;
- 1,382,371 shares of common stock available for future issuance under our stock option plan; and
- 297,611 shares of common stock available for future issuance under our employee stock purchase plan.

Price range of our common stock

Our common stock has been quoted on the Nasdaq National Market under the symbol "ARRY" since our initial public offering on November 17, 2000. The following table sets forth, for the periods indicated, the reported high and low intraday sales prices per share of our common stock as reported by the Nasdaq National Market:

Year ended June 30, 2003	**High**	**Low**
First Quarter	$ 9.74	$ 5.99
Second Quarter	9.20	4.77
Third Quarter	5.78	3.92
Fourth Quarter	4.49	2.10
Year ended June 30, 2004	**High**	**Low**
First Quarter	6.54	3.10
Second Quarter	6.31	4.55
Third Quarter	9.55	5.76
Fourth Quarter	11.85	7.82
Year ending June 30, 2005	**High**	**Low**
First Quarter	8.31	5.29
Second Quarter (as of November 26, 2004)	9.04	6.46

On November 26, 2004, the closing price of our common stock as reported by the Nasdaq National Market was $8.46 per share. As of November 19, 2004, there were approximately 102 stockholders of record of our common stock. This does not include the number of persons whose stock is held in nominee or "street name" accounts through brokers.

Dividend policy

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings to finance the growth and development of our business. Therefore, we do not anticipate that we will declare or pay any cash dividends on our common stock in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of our Board of Directors and will depend on our financial condition, results of operations, capital requirements, restrictions under any existing indebtedness and other factors the Board of Directors deems relevant.

Underwriting

We are offering the shares of our common stock described in this prospectus supplement through the underwriters named below. UBS Securities LLC, Legg Mason Wood Walker, Incorporated, Piper Jaffray & Co. and Thomas Weisel Partners LLC are the representatives of the underwriters. UBS Securities LLC is the sole book running manager of this offering.

We have entered into an underwriting agreement with the representatives. Subject to the terms and conditions of the underwriting agreement, each of the underwriters has severally agreed to purchase the number of shares of common stock listed next to its name in the following table:

Underwriters	Number of shares
UBS Securities LLC	
Legg Mason Wood Walker, Incorporated	
Piper Jaffray & Co.	
Thomas Weisel Partners LLC	
Total	6,000,000

The underwriting agreement provides that the underwriters must buy all of the shares if they buy any of them. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

Our common stock is offered subject to a number of conditions, including:

- receipt and acceptance of our common stock by the underwriters, and
- the underwriters' right to reject orders in whole or in part.

In connection with this offering, certain of the underwriters or securities dealers may distribute prospectuses electronically.

INDEMNIFICATION

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act. If we are unable to provide this indemnification, we will contribute to payments the underwriters may be required to make in respect of those liabilities.

OVER-ALLOTMENT OPTION

We have granted the underwriters an option to buy up to 900,000 additional shares of our common stock. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with this offering. The underwriters have 30 days from the date of this prospectus supplement to exercise this option. UBS Securities LLC will underwrite the full amount of shares that are purchased pursuant to this option.

COMMISSIONS AND DISCOUNTS

Shares sold by the underwriters to the public will initially be offered at the offering price set forth on the cover of this prospectus supplement. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. Any of these

securities dealers may resell any shares purchased from the underwriters to other brokers or dealers at a discount of up to $ per share from the initial public offering price. If all the shares are not sold at the initial public offering price, the representative may change the offering price and the other selling terms. Sale of shares made outside of the United States may be made by affiliates of the underwriters. Upon execution of the underwriting agreement, the underwriters will be obligated to purchase the shares at the prices and upon the terms stated therein, and, as a result, will thereafter bear any risk associated with changing the offering price to the public or other selling terms.

The following table shows the per share and total underwriting discounts and commissions we will pay to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional 900,000 shares.

	No exercise	Full exercise
Per share	$	$
Total	$	$

We estimate that the total expenses of this offering payable by us, not including the underwriting discounts and commissions, will be approximately $250,000.

NO SALES OF SIMILAR SECURITIES

We and our executive officers and directors have entered into lock-up agreements with the underwriters. Under these agreements, we and each of these persons may not, without the prior written approval of UBS Securities LLC, subject to certain permitted exceptions, offer, sell, contact to sell or otherwise dispose of or sell our common stock or securities convertible into or exercisable or exchangeable for our common stock. These restrictions will apply for a period of 90 days after the date of this prospectus supplement. The 90-day lock up period may be extended under certain circumstances where we announce or pre-announce earnings or material news or a material event within approximately 18 days prior to, or approximately 16 days after, the termination of the 90-day period. At any time and without public notice, UBS Securities LLC may, in its sole discretion, release all or some of the securities from these lock-up agreements.

One of our executive officers has pledged approximately 85,000 shares of our common stock owned by the executive officer to two financial institutions as security for certain loans taken out by the executive officer. The lock-up agreement entered into by this executive officer will not prevent these financial institutions from selling these shares pursuant to the executive officer's collateral agreements with these institutions.

NASDAQ NATIONAL MARKET QUOTATION

Our common stock is quoted on the Nasdaq National Market under the symbol "ARRY."

PRICE STABILIZATION, SHORT POSITIONS, PASSIVE MARKET MAKING

In connection with this offering, the underwriters may engage in activities that stabilize, maintain or otherwise affect the price of our common stock, including:

- stabilizing transactions;
- short sales;

-

- purchases to cover positions created by short sales;
- imposition of penalty bids;
- syndicate covering transactions; and
- passive market making.

Stabilizing transactions consist of bids or purchases made for the purpose of preventing or retarding a decline in the market price of our common stock while this offering is in progress. These transactions may also include making short sales of our common stock, which involves the sale by the underwriters of a greater number of shares than they are required to purchase in this offering and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' over-allotment option referred to above, or may be "naked" shorts, which are short positions in excess of that amount.

The underwriters may close out any covered short position by either exercising their over-allotment option, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option.

Naked short sales are sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned there may be downward pressure on the price of shares in the open market after pricing that could adversely affect investors who purchase in this offering.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representative has repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.

As a result of these activities, the price of our common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. The underwriters may carry out these transactions on the Nasdaq National Market, in the over-the-counter market or otherwise.

In addition, in connection with this offering, certain of the underwriters (and selling group members) may engage in passive market making transactions in the common stock on the Nasdaq National Market prior to the pricing and completion of the offering. Passive market making consists of displaying bids on the Nasdaq National Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of the common stock to be higher than the price that otherwise would exist in the open market in the absence of such transactions. If passive market making is commenced, it may be discontinued at any time.

AFFILIATIONS

Certain underwriters and their affiliates have provided and may provide certain commercial banking, financial advisory and investment banking services for us for which they receive customary fees.

Certain underwriters and their affiliates may from time to time in the future engage in transactions with us and perform services for us in the ordinary course of their business.

Information incorporated by reference

The SEC allows us to incorporate by reference the information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement. These documents may include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as Proxy Statements. Any documents that we subsequently file with the SEC will automatically update and replace the information previously filed with the SEC. Thus, for example, in the case of a conflict or inconsistency between information set forth in this prospectus and information incorporated by reference into this prospectus, you should rely on the information contained in the document that was filed later.

This prospectus incorporates by reference the documents listed below that we have previously filed (under File No. 001-16633) with the SEC and any additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

1. Our Annual Report on Form 10-K for the fiscal year ended June 30, 2004 filed with the SEC on September 3, 2004, including information incorporated by reference from our Definitive Proxy Statement on Schedule 14A for our annual meeting of stockholders, filed with the SEC on October 5, 2004;

2. Our Quarterly Report on Form 10-Q for the period ended September 30, 2004, filed with the SEC on November 1, 2004;

3. Our Current Reports on Form 8-K filed with the SEC on August 10, 2004, on October 18, 2004 and on November 1, 2004 (but only the Form 8-K filed on such date reporting information under Items 7.01 and 9.01); and

4. The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on November 16, 2000, and the description of our preferred stock purchase rights contained in our Registration Statement on Form 8-A filed with the SEC on August 3, 2001, including any amendment or report filed for the purpose of updating such descriptions.

You can obtain a copy of any or all of these documents, including any exhibits thereto, at no cost, by visiting the Investor Relations section of our web site at *http://www.arraybiopharma.com* or by requesting them in writing or by telephone at the following address:

Array BioPharma Inc.
3200 Walnut Street
Boulder, Colorado 80301
(303) 381-6600
Attention: Investor Relations

Statements contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein referring to the contents of any contract or other document are not necessarily complete. Where such contract or other document is listed as an exhibit to the Registration Statement on Form S-3, of which this prospectus supplement and the accompanying prospectus form a part, or any document incorporated by reference therein, each such statement is qualified by the provisions in such exhibit, to which reference is hereby made.

Information contained on our website does not constitute a part of this prospectus supplement or the accompanying prospectus.

Legal matters

The validity of the common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon for us by Hogan & Hartson L.L.P., Boulder, Colorado. Dewey Ballantine LLP, New York, New York is counsel for the underwriters in connection with this offering.

Experts

Ernst & Young LLP, independent auditors, have audited our financial statements included in our Annual Report on Form 10-K for the year ended June 30, 2004, as set forth in their report, which is incorporated by reference in this prospectus supplement and the accompanying prospectus. We have incorporated our financial statements by reference in reliance on the report of Ernst & Young LLP, given on the authority

of said firm as experts in accounting and auditing.

Effective October 14, 2004, the Audit Committee of our Board of Directors determined to replace Ernst & Young LLP as our independent accountants and to engage KPMG LLP to act as our independent accountants for the fiscal year ending June 30, 2005. Please refer to the Form 8-K we filed with the Securities and Exchange Commission on October 18, 2004 for more information on the change in our independent accountants.

PROSPECTUS

ARRAY BIOPHARMA INC.

UP TO $70,000,000 OF OUR
COMMON STOCK
PREFERRED STOCK
COMMON STOCK WARRANTS
PREFERRED STOCK WARRANTS

We may offer from time to time up to $70,000,000 in total of (a) shares of our common stock, (b) shares of our preferred stock, in one or more series, (c) warrants to purchase shares of common stock or shares of our preferred stock, or (d) any combination of our common stock, preferred stock or warrants. We may offer the common stock, preferred stock and warrants (collectively, the "securities") separately or together, in separate series, in amounts, at prices and on terms to be set forth in one or more supplements to this prospectus.

Each time we plan to issue securities, we will circulate a prospectus supplement, which will contain a description of the securities being offered and information about the specific terms, the public offering price of the securities and the net proceeds we expect to receive from such sale, and may add, update or change information contained in this prospectus. You should read this prospectus and the prospectus supplements carefully before you invest.

The securities may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers. We will set forth the names of any underwriters or agents in an accompanying prospectus supplement. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution".

Our common stock is quoted on the Nasdaq National Market and traded under the symbol "ARRY". On June 18, 2004, the last reported sale price for our common stock was $8.83 per share.

An investment in our securities involves a high degree of risk. You should carefully consider the "Risk Factors" beginning on page 9 of this prospectus, and in our future filings made with the Securities and Exchange Commission, which are incorporated by reference in this prospectus.

This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 18, 2004

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC using a "shelf" registration process. Under this shelf process, we may from time to time offer up to $70,000,000 in total of:

shares of common stock, $0.001 par value per share;

shares of preferred stock, $0.001 par value per share, in one or more series;

warrants to purchase shares of common stock or shares of preferred stock; or

any combination of our common stock, preferred stock or warrants.

We may sell these securities either individually or as units consisting of one or more of the foregoing, each at prices and on terms to be determined at the time of sale. The common stock, preferred stock and warrants are collectively referred to in this prospectus as "securities". The securities offered pursuant to this prospectus may be one or more series of issuances and the total offering price of the securities will not exceed $70,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with the additional information described below under the heading "Where You Can Find More Information". This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

You should rely only on the information provided in the registration statement of which the prospectus is a part, this prospectus, any prospectus supplement and any documents incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with different information. The information in this prospectus or any prospectus supplement is accurate only as of the date of the document on the front of the document, and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

Our trademarks include the Array BioPharma logo and the terms "ARRAY BIOPHARMA", "ARRAY BIOPHARMA THE DISCOVERY RESEARCH COMPANY", "TURNING GENOMICS INTO BREAKTHROUGH DRUGS", "OPTIMER", and "ARRAY DISCOVERY PLATFORM". Other trademarks and trade names appearing in this prospectus are the property of the holders of such trademarks and trade names.

**SPECIAL NOTE REGARDING
FORWARD-LOOKING STATEMENTS**

This prospectus contains and incorporates by reference certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements that are not descriptions of historical facts are forward-looking statements, based on management's estimates, assumptions and projections that are subject to risks and uncertainties. These statements can generally be identified by the use of forward-looking terminology such as "believes," "expects," "intends," "may," "will," "should," or "anticipates" or similar terminology.

These statements involve significant risks and uncertainties, including those discussed below and those described more fully in other reports filed by Array with the SEC. Because these statements reflect our current expectations concerning future events, our actual results could differ materially from those anticipated in these forward-looking statements. The factors that could cause actual results to differ from our expectations include, but are not limited to, our ability to achieve and maintain profitability, the extent to which the pharmaceutical and biotechnology industries are willing to collaborate with and fund third parties to in-license drug candidates for their product pipelines and on their drug discovery activities, the ability of our collaborators and of Array to meet drug discovery objectives tied to milestones and royalties, our ability to continue to fund and successfully progress internal research efforts and to create effective, commercially viable drugs, our ability to attract and retain experienced scientists and management, and the risk factors set forth below under the caption "Risk Factors." The forward-looking statements contained herein represent our judgment as of the date of this prospectus. We disclaim any intent or obligation to update any forward-looking statement except to the extent required by law.

SUMMARY

Overview of Array BioPharma

Array BioPharma is a drug discovery company creating the next generation of orally active drugs by integrating the latest advances in chemistry, biology and informatics. Our drug development pipeline is focused primarily on cancer and inflammatory disease and includes several promising small molecule drugs that regulate targets in therapeutically important disease pathways. In addition, we collaborate with leading pharmaceutical and biotechnology companies to design, create and optimize drug candidates across a broad range of therapeutic areas. Our mission is to be the most efficient inventor of high quality drug candidates in the pharmaceutical industry.

Founded in 1998, Array is headquartered in Boulder, Colorado and employs over 250, including 186 scientists, housed in 150,000 square feet of state-of-the-art laboratory facilities. We have out-licensed three of our proprietary research programs for co-development with AstraZeneca PLC and Genentech, Inc., and have research collaborations with leading pharmaceutical and biotechnology companies including AstraZeneca, Eli Lilly and Company, GenPath Pharmaceuticals, Inc., Hoffman-La Roche Inc., InterMune, Inc., Japan Tobacco Inc. and Takeda Chemical Industries, Ltd.

Opportunities in Drug Discovery

The pharmaceutical industry has an ongoing need to fill their clinical development pipelines with quality drug candidates to drive future revenue growth. Despite increased spending on internal research, the pharmaceutical industry has been unable to meet this demand. As a result, pharmaceutical companies have increased in-licensing drug candidates at all stages of development, with approximately 37% of late-stage candidates in-licensed by major pharmaceutical companies in 2003. We believe demand for in-licensed clinical candidates is also driven by their higher success rate; in-licensed clinical candidates are more likely to succeed in winning Food and Drug Administration, or FDA, marketing approval than those developed by a single company. However, we believe there is an inadequate supply of quality clinical candidates available to license, particularly in Phase III. Consequently, the pharmaceutical industry will likely seek to license more clinical candidates earlier in the discovery process, resulting in higher value deals at each stage of development.

The Array Business Strategy

We believe Array's ability to efficiently invent quality drug candidates has positioned us to benefit from these opportunities in drug discovery, both in out-licensing our proprietary candidates and in creating drug candidates through collaborations with pharmaceutical and biotechnology companies. We intend to increase the value of our proprietary candidates by progressing select candidates further through clinical development before seeking an out-licensing partner. We have built an integrated suite of drug discovery technologies, the Array Discovery Platform, to create, evaluate and develop high quality drug candidates.

We are building the industry's premier drug discovery company by:

- Filling our proprietary pipeline with high quality drug candidates targeting large markets, primarily in cancer and inflammatory disease, which we will potentially develop through Phase II clinical trials;

- Out-licensing drug candidates for late-stage co-development and commercialization with pharmaceutical and biotechnology partners to obtain the highest value while also evaluating earlier out-licensing opportunities to maximize risk-adjusted return;

Identifying drug candidates in collaboration with leading pharmaceutical and biotechnology companies, where we receive research funding and share in the success we create through potential milestone and/or royalty payments; and

Enhancing the Array Discovery Platform by developing novel tools, implementing new technologies and continuing to hire scientists with proven success in drug discovery.

Proprietary Research and Development

Our proprietary research focuses on biologic functions, or pathways, which have been identified as important in the treatment of human disease, primarily cancer and inflammatory diseases. We seek to identify large-market opportunities in drug discovery in pathways that have been validated by drugs in clinical development or on the market, but for which many of the drugs have therapeutic liabilities. Our strategy is to continue to efficiently create clinical candidates with improved, or best-in-class, drug characteristics that overcome these liabilities, to provide more effective and successful drugs. In addition, we are selectively seeking to create first-in-class drug candidates against novel targets of broad medical interest for which no drug has been marketed.

We have invested nearly $29 million in our proprietary research through December 31, 2003. We have demonstrated the value of this investment by out-licensing three cancer programs with AstraZeneca and Genentech, two of the world's leading oncology companies. Both agreements include up-front payments, research funding, success-based milestones and royalties on product sales. In addition to these out-licensed programs, we are selecting potential clinical candidates in four programs to advance into preclinical safety assessment, including regulated toxicology testing. We are also evaluating or screening over a dozen targets for new drug research and development.

The following pipeline chart shows our most advanced proprietary programs and their stage in the drug discovery process. Our five most advanced programs are described below.

Cancer Programs

Many tumors require certain growth factors to drive their aberrant growth, prolonged survival and differentiation. These growth factors interact with proteins in the cell membrane, including proteins called Type I receptor kinases, which transmit their growth signal into the cell through a cascade of enzymatic events. These receptors, including EGFR, ErbB-2, VEGF and PDGF, are found to be over-expressed, or over-activated, in numerous human tumors. Several drugs currently on the market or

in development, such as Herceptin®, Iressa®, Avastin® and Erbitux®, target these receptors, demonstrating their importance in cancer therapy.

In addition, particular enzymes within cascades, or pathways, are also important for tumors to continue to proliferate. We believe interfering with these enzymes and blocking multiple pathways simultaneously in tumors will likely play significant roles in future cancer treatments. MEK is a critical enzyme at the intersection of several pathways and regulates cell proliferation, survival, migration and differentiation found as part of the ras/raf/MEK/erk pathway.

ARRY-142886. We initiated an anti-cancer research program targeting MEK in July 2001, and within 17 months identified ARRY-142886, an orally active clinical candidate. ARRY-142886 has shown tumor suppressive or regressive activity in multiple preclinical models of human cancer including melanoma, pancreatic, colon, lung and breast cancers. We believe our MEK inhibitors' advantages include ease of use, improved efficacy linked to tissue penetration and cost effectiveness. We received clearance from the FDA to enter Phase I clinical testing, which we expect to initiate in fiscal 2004. The trial is designed to evaluate tolerability and pharmacokinetics of ARRY-142886 following oral administration to patients with advanced cancer. In addition, the trial is designed to examine patients for indications of biological activity as well as pharmacodynamic and tumor biomarkers.

In December 2003, AstraZeneca acquired exclusive, worldwide rights to ARRY-142886, which they call AZD6244, and related intellectual property for oncology indications. Array is responsible for filing an Investigational New Drug application (IND), current Good Manufacturing Practices, or cGMP, manufacturing of Phase I clinical supplies and conducting a Phase I clinical trial. AstraZeneca will be responsible for all other aspects of clinical development and commercialization.

ErbB-2 Inhibitors. ErbB-2 is a receptor kinase target that has been found to be over-expressed in human breast and other cancers. We have identified orally active, small molecule ErbB-2 inhibitors, which have shown potency, excellent drug characteristics and a low side effect profile in preclinical models of human cancer and are in the process of selecting, from among these inhibitors, the most promising clinical candidate to move into regulated toxicology testing. Herceptin is an IV-dosed protein therapeutic currently on the market that modulates ErbB-2. We believe our ErbB-2 inhibitors' advantages include ease of use, improved efficacy linked to tissue penetration and cost effectiveness.

EGFR / ErbB-2 Inhibitors. EGFR is a receptor kinase target that has been found to be over-expressed in numerous human cancers, including breast, lung, pancreatic, head and neck cancers. The concurrent inhibition of both EGFR and ErbB-2 to provide enhanced efficacy in cancer treatment has been hypothesized in the scientific literature. Currently, there is no single drug on the market that inhibits both EGFR and ErbB-2. Erbitux, an IV-dosed protein therapeutic, and Iressa, a small molecule inhibitor, are drugs currently on the market that modulate EGFR only. We have identified orally active, small molecule dual EGFR/ErbB-2 inhibitors, which have shown potency, excellent drug characteristics and a low side effect profile in preclinical models of human cancer. We believe our dual inhibitors' advantages include ease of use, improved efficacy linked to tissue penetration and cost effectiveness. We are in the process of selecting, from among these inhibitors, the most promising clinical candidate to move into regulated toxicology testing.

Inflammation Programs

Scientific literature has documented the role of certain pro-inflammatory proteins, or cytokines, in the initiation, progression and augmentation of inflammatory diseases, including rheumatoid arthritis, psoriasis, inflammatory bowel disorders and asthma, and other chronic, degenerative diseases, including

chronic obstructive pulmonary disease, diabetic complications, fibrotic organ failure and atherosclerosis. These cytokines include IL-1, TNF and IL-6. A number of injectable protein therapeutics that regulate TNF or IL-1 activity have demonstrated clinical efficacy or are under clinical evaluation for the treatment of some inflammatory and chronic degenerative diseases.

p38 Inhibitors. p38 is a kinase target that has been found to regulate the production of numerous pro-inflammatory cytokines, in particular, both TNF and IL-1. IV-dosed protein therapeutics currently on the market, which include Enbrel®, Remicade®, Humira® and Kineret ®, bind to and modulate the activity of the cytokines TNF or IL-1. Array has identified orally active, small molecule p38 inhibitors, which have shown potency, excellent drug characteristics and a low side effect profile in preclinical models of human arthritis and inflammatory bowel disorders. We believe our p38 inhibitors' advantages include ease of use, improved efficacy linked to dual IL-1/TNF inhibition and cost effectiveness. We are in the process of selecting, from among these inhibitors, the most promising clinical candidate to move into regulated toxicology testing.

MEK Inhibitors. MEK is a kinase target that has been demonstrated to have a role in the biosynthesis of TNF and IL-1. Our scientists have discovered MEK inhibitors that selectively interfere with this biosynthetic process. We have also received clearance from the FDA to advance one MEK inhibitor, ARRY-142886, into clinical development for the treatment of cancer. Given our experience with the safety profile of MEK inhibitors, we believe inhibition of MEK will have applications in diseases driven by IL-1 and TNF. We have identified several series of orally active, small molecule MEK inhibitors, which have shown potency, excellent drug characteristics and a low side effect profile in preclinical models of human arthritis, pain and inflammatory bowel disorders. We believe our MEK inhibitors would provide broad therapeutic benefits in the treatment of inflammatory and chronic degenerative diseases. We are in the process of selecting, from among these inhibitors, the most promising clinical candidate to move into regulated toxicology testing.

Out-Licensing Summary

AstraZeneca ARRY-142886/MEK for Oncology

Array and AstraZeneca initiated in December 2003 a licensing and collaboration agreement to develop Array's MEK program in the field of oncology. The program includes the clinical development candidate, ARRY-142886, and related intellectual property. Under the agreement, we received an up-front payment of $10 million and research funding, with potential development milestones of over $85 million (depending on the number of successfully commercialized products) and royalties on product sales. AstraZeneca acquired exclusive worldwide rights to ARRY-142886 and certain second-generation compounds for all oncology indications. We retain the rights to all other therapeutic indications for compounds not selected by AstraZeneca for development.

Under the agreement, we have filed an IND and are responsible for Phase I clinical testing and certain aspects of process research for the development of ARRY-142886. In addition, we are responsible for creating a select number of second-generation compounds, including cGMP manufacturing of Phase I clinical materials. AstraZeneca is responsible for all other aspects of clinical development and commercialization.

Genentech Two Oncology Programs

We initiated a licensing and collaboration agreement with Genentech in December 2003 for multiple targets in the field of oncology. As part of this agreement, Array and Genentech formed a research collaboration to advance two of Array's proprietary oncology programs into clinical development. These programs include small molecule leads we developed along with additional, related Array intellectual property. Array received an up-front payment and research funding, with potential development milestones and royalties on resulting product sales. Genentech is responsible for clinical

development and commercialization of the resulting products. Genentech has the right to add additional programs to this collaboration.

Investment In Proprietary Research

We have invested $28.9 million in proprietary research from our inception through December 31, 2003. Our proprietary research investment has resulted in three out-licensing agreements, four preclinical programs that we are evaluating for drug candidate nomination and over a dozen targets that we are evaluating or screening for potential development. The following chart shows the growth of our investment in proprietary research.

Proprietary research and development expenses (*)

Fiscal Year	(in millions)
1999	$ 0.8
2000	1.1
2001	1.6
2002	5.5
2003	11.2
2004 (6 months)	8.7
Total	$ 28.9

(*) Excludes compensation expense related to option grants

Resulting from this investment, we have completed three out-licensing agreements with AstraZeneca and Genentech in December 2003, and with Amgen in November 2000, that include the following aggregate terms.

Up-Front Payments	$18 million
Research Funding	Up to 50 scientists in calendar 2004
Potential Milestones	$147 million
Potential Royalties	AstraZeneca and Genentech

We believe our investment in proprietary research is proving to be a productive use of capital and advances Array towards its goal of being one of the most efficient creators of high quality drug candidates. In the future, we plan to increase our investment in proprietary research and development and to develop select programs through Phase II clinical testing. We believe this strategy will significantly increase the value of future out-licensing agreements and enhance our return on our investment in proprietary research.

Collaborations

In addition to developing and out-licensing our proprietary programs, we collaborate with leading pharmaceutical and biotechnology companies to design, create and optimize drug candidates across a broad range of therapeutic areas. These collaborations focus on targets that are outside of our proprietary research programs. In these collaborations, we receive research funding, and, in a number of our current collaboration agreements, we are entitled to up-front fees, milestone payments upon achievement of certain drug discovery objectives and/or royalties based upon sales of products commercialized by our collaborators as a result of these agreements. We also sell or license research tools, including our Optimer® building blocks and our Lead Generation Libraries, on a non-exclusive basis to multiple collaborators. We have ongoing research collaborations, or have completed the

research phase and delivered drug candidates to: Eli Lilly, GenPath, Hoffman-La Roche, ICOS Corporation, InterMune, Japan Tobacco, Procter & Gamble Pharmaceuticals, Takeda and Trimeris, Inc.

We have 12 programs ongoing in our laboratories in screening, lead generation or lead optimization. In addition, we have delivered lead compounds on nine programs for further lead optimization, clinical candidates on seven programs for preclinical development and one program that our collaborator has advanced to Phase II clinical testing.

Array's Research and Development Capabilities

We have grown our staff to 250 full-time employees as of April 1, 2004, including 186 scientists, of whom 105 have Ph.D.s and 74 have experience at large pharmaceutical or biotechnology companies. Members of our scientific staff have contributed during their careers to more than 20 INDs, and are inventors on over 200 drug-related patents and patent applications and are authors on over 1,100 scientific publications.

Our scientists use the Array Discovery Platform, an integrated suite of drug discovery technologies, to create high quality drug candidates, evaluate them for clinical development and conduct clinical development, with the ability to develop candidates through Phase II clinical testing. A critical capability within the Array Discovery Platform is our proprietary computational software, which enables our scientists to search databases of existing drugs, to generate novel predictive databases and to create modeling programs designed to better forecast drug characteristics. We use predictive pharmacodynamic and pharmacokinetic models to select higher quality compounds. Early in the drug discovery process, our scientists engineer into a drug candidate desirable drug characteristics, such as improved potency, specificity and dosing regimen and reduced side effect profile. The resulting compounds are thoroughly tested for safety, efficacy and metabolism to select the most promising clinical candidates. We believe that this approach will significantly improve on the industry's existing clinical attrition rates.

Using The Array Discovery Platform To Create and Develop Drug Candidates

Array scientists first clone and express the target protein in the appropriate cell line and purify milligram quantities of active proteins. We then develop physiologically relevant assays for both high throughput screening and identify biomarkers that can be used to understand the mechanism of action of drugs. Biomarkers are quantitative measurements of precise cellular events on particular proteins

and can be used to measure drug characteristics such as potency, selectivity and efficacy in research, preclinical development and clinical trials.

In parallel, structural studies are initiated to generate x-ray quality crystals and computational models of the protein allowing Array scientists to initiate directed virtual screening of compounds. Through the use of scientific literature, computational models, structural information and directed screening, proprietary lead compounds are identified that are predicted to have drug characteristics that will allow for ready optimization of a drug candidate. Our medicinal chemists then make small changes in chemical structure to optimize drug characteristics using both computational models and direct biologic measurements of absorption and metabolism including liver p450 enzymes, multi-species hepatocytes, caco-2 and solubility. Certain compounds which attain predefined goals for quality are then progressed to more advanced studies in multiple animal models of efficacy, pharmacokinetics and toxicity. In particular, our scientists correlate changes in biomarkers as they relate to changes in drug characteristics. Typically, we profile several hundred compounds to identify a particular candidate with advantages over current therapy or competitor compounds. We use biomarkers, together with *in vitro* and *in vivo* pharmacokinetic measurements in human cells and animal models to predict safe and efficacious clinical doses. The final candidate is then advanced into clinical development to evaluate its safety and efficacy in humans.

Array's clinical development strategy is to streamline the drug development process through Phase II clinical trials. We create scientifically robust IND submissions to speed initiation of human clinical testing. Our in-house cGMP manufacturing capability accelerates the production of clinical supplies by eliminating the need to transfer the manufacturing process technology to a third party. We have expertise in both clinical development and regulatory affairs, through our employees and consultants. Array is building relationships and accessing thought leaders with key academic medical centers for cancer and inflammatory disease. We use biomarkers as an integral element of our clinical design strategy to select patients and speed clinical development. We believe our overall research and development strategies can speed the creation and development of important drugs.

The mailing address and telephone number of our principal executive offices are 3200 Walnut Street, Boulder, Colorado 80301, (303) 381-6600.

Securities We Are Offering

We may offer any of the following securities with a total value of up to $70,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of the offering:

- common stock;
- preferred stock, in one or more series;
- warrants to purchase shares of common stock or shares of preferred stock; or
- any combination of common stock, preferred stock or warrants.

We refer to our common stock, preferred stock and warrants collectively in this prospectus as "securities". This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, as described below under "Plan of Distribution".

Common Stock. We may offer shares of our common stock. Our common stock currently is quoted on the Nasdaq National Market under the symbol "ARRY". Shares of common stock that may be offered in this offering will, when issued and paid for, be fully paid and non-assessable.

Preferred Stock. We may offer shares of our preferred stock, in one or more series. The terms of any series of preferred stock will be described in the prospectus supplement relating to the offering for that series of preferred stock. Our board of directors will determine the rights, preferences, privileges and restrictions of the preferred stock, including any dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series. Convertible preferred stock will be convertible into shares of our common stock. Conversion may be mandatory or at your option and would be at prescribed conversion rates. Shares of preferred stock that may be offered in this offering will, when issued and paid for, be fully paid and non-assessable.

Warrants. We may issue warrants for the purchase of shares of our common stock or preferred stock. Warrants may be issued independently or together with the shares of common stock or preferred stock offered by any prospectus supplement and may be attached to or separate from such shares. Further terms of the warrants will be set forth in the applicable prospectus supplement, including, where applicable, the following:

- the title of such warrants;
- the aggregate number of warrants;
- the price or prices at which the warrants will be issued;
- the designation, terms and number of shares of common stock or preferred stock purchasable upon exercise of the warrants;
- the designation and terms of the shares of common stock or preferred stock with which the warrants are issued and the number of warrants issued with such shares;
- the date on and after which the warrants and the related common stock or preferred stock will be separately transferable, including any limitations on ownership and transfer of the warrants;

the price at which each share of common stock or preferred stock purchasable upon exercise of the warrants may be purchased;

any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants;

the dates on which the right to exercise the warrants shall commence and expire;

the minimum or maximum amount of warrants that may be exercised at any one time;

information with respect to book-entry procedures, if any;

a discussion of certain federal income tax consequences; and

any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

RISK FACTORS

Investment in our securities involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus, you should carefully consider the specific risks set forth below before making an investment decision. The risks and uncertainties described below could adversely affect our business, operating results and financial condition, as well as cause the value of our common stock, preferred stock or warrants to decline. You may lose all or part of your investment as a result. You should also refer to the other information contained in this prospectus or incorporated by reference, including our consolidated financial statements and the notes to those statements, and the information set forth under the caption "Special Note Regarding Forward-Looking Statements" above.

Risks Related to Our Business

WE MAY NOT ACHIEVE OR SUSTAIN PROFITABILITY.

We are at an early stage of executing our business plan, and we have a limited history of developing and out-licensing our proprietary drug candidates and offering our drug discovery capabilities. We have incurred operating and net losses and negative cash flows from operations since our inception. As of December 31, 2003, we had an accumulated deficit of $56.4 million. We had net losses of $19.6 million, $4.5 million and $10.6 million for the fiscal years ended June 30, 2003, 2002 and 2001, respectively, and of $12.2 million for the first six months of fiscal year 2004. We may continue to incur operating and net losses and negative cash flows, due in part to anticipated increases in expenses for research and development, expansion of our scientific and business development capabilities, and acquisitions of complementary businesses and technologies. We may not be able to achieve or maintain profitability. Moreover, if we do achieve profitability, the level of any profitability cannot be predicted and may vary significantly.

WE MAY NOT SUCCESSFULLY DEVELOP A DRUG CANDIDATE THAT BECOMES A COMMERCIALLY VIABLE DRUG.

The drug discovery process is highly uncertain, and we have not discovered, and may never discover, a drug candidate that ultimately leads to a commercially viable drug. All of our drug candidates are in the early stages of development, and candidates that appear promising may fail to become commercially viable drugs for a number of reasons, including:

clinical trial results that indicate a candidate is not effective in treating a specified condition or illness in humans or has harmful side effects;

the failure to obtain FDA or other regulatory approval;

the assessment of our collaborators concerning the commercial viability of manufacturing a particular drug;

the intellectual property rights to a drug candidate that we or our collaborators cannot acquire on reasonable terms; and

existing therapeutics that are more effective or economical to produce.

At any time, we or our collaborators may decide to discontinue the development of a drug candidate or not to commercialize a candidate. Even if one of our drug candidates receives regulatory approval for commercialization, physicians and consumers may not find that its effectiveness, ease of use, side effect profile, cost or other factors make it effective in treating disease or more beneficial than or preferable to other drugs on the market. Additionally, health insurance plans or maintenance organizations may choose not to include the drug on their formulary list for reimbursement. As a result, the drug may not be used or may be used only for more restricted applications than we expect.

OUR BUSINESS DEPENDS ON THE EXTENT TO WHICH THE PHARMACEUTICAL AND BIOTECHNOLOGY INDUSTRIES IN-LICENSE DRUG CANDIDATES TO FILL THEIR PRODUCT PIPELINES AND COLLABORATE WITH DRUG DISCOVERY COMPANIES FOR ONE OR MORE ASPECTS OF THEIR DRUG DISCOVERY PROCESS.

We are highly dependent on pharmaceutical and biotechnology companies continuing to in-license drug candidates to fill their clinical development pipelines and to collaborate with outside companies to obtain drug discovery expertise, and on their willingness to spend significant funds on research and development. Our capabilities include aspects of the drug discovery process that pharmaceutical and biotechnology companies have traditionally performed internally. The willingness of these companies to in-license drug candidates and to expand or continue drug discovery collaborations to enhance their research and development process is based on several factors that are beyond our control, such as their ability to hire and retain qualified scientists, the resources available for entering into drug discovery collaborations, the spending priorities among various types of research activities and their policies regarding the balance of research expenditures versus cost containment. Any of these factors could cause our revenue to decline. In addition, our ability to convince these companies to in-license our drug candidates or programs or to use our drug discovery capabilities, rather than develop them internally, will depend on many factors, including our ability to:

discover competitive drug candidates targeting large market opportunities;

develop and implement drug discovery technologies that will result in the identification of higher-quality drug candidates;

attract and retain experienced, high caliber scientists;

achieve timely, high quality results at an acceptable cost; and

design, create and manufacture our chemical compounds in quantities, at purity levels and at costs that are acceptable to our collaborators.

The importance of these factors varies depending on the company and type of discovery program, and although we believe we currently address many of these factors, we may be unable to meet any or all of them in the future. Even if we are able to address these factors, these companies may still decide to perform these activities internally or with other companies that provide drug research and development expertise similar to ours.

WE MAY NOT OUT-LICENSE OUR PROPRIATARY PROGRAMS AT THE MOST APPROPRIATE TIME TO MAXIMIZE THE TOTAL VALUE OR RETURN OF THESE PROGRAMS TO US.

A critical aspect of our business strategy is to out-license drug candidates for late-stage co-development and commercialization to obtain the highest possible value while also evaluating earlier out-licensing opportunities to maximize our risk-adjusted return on our investment in proprietary

research. Because the costs and risk of failure of bringing a drug to market are high, the value of out-licensing a drug candidate generally increases as it successfully progresses through clinical trials. Array may choose or be forced to out-license a drug candidate or program at a point in the research and development process that does not provide as great a value or return than what might have been obtained if we had further developed the candidate or program internally. Likewise, we may decline, or be unable to obtain favorable, early out-licensing opportunities in programs that do not result in a commercially viable drug, which could leave the resulting program with little or no value even though significant resources were invested in its development. We may miscalculate the most appropriate time to out-license a drug candidate or program, or we may not be able to out-license a drug candidate or program on favorable terms, or at all.

WE MAY NOT BE SUCCESSFUL IN ENTERING INTO ADDITIONAL OUT-LICENSE AGREEMENTS THAT ALLOW US TO PARTICIPATE IN THE FUTURE SUCCESS OF OUR PROPRIETARY DRUG CANDIDATES THROUGH MILESTONE, ROYALTY AND/OR LICENSE PAYMENTS.

We have committed, and intend to continue to commit, significant resources to create our own proprietary drug candidates and collaborate with a partner for co-development and commercialization, allowing us to earn upfront payments, license fees, research funding, milestone and/or royalty payments. In fiscal 2003, we increased our investment in proprietary research to $11.2 million compared to $5.5 million for fiscal 2002, and for the six months ended December 31, 2003 our spending in this area increased to $8.7 million compared to $4.5 million for the six months ended December 31, 2002. Our proprietary drug discovery programs are in their early stage of development and unproven. To date, we have entered into three out-licensing agreements for the co-development and commercialization of our drug candidates. Although we have expended, and continue to expend, resources on internal research and development for our proprietary programs and for our collaborators, we may not be successful in creating valuable proprietary drug candidates that would enable us to form additional collaborations with favorable terms that include upfront, milestone, royalty and/or license payments. If we are unsuccessful in establishing favorable collaborations in the future, our revenues and cash flows could be negatively impacted.

THE SALE AND MANUFACTURE OF DRUG CANDIDATES THAT WE DEVELOP WITH OUR COLLABORATORS OR ON OUR OWN MAY NOT RECEIVE REGULATORY APPROVAL.

The development and commercialization of drug candidates for our collaborators and our own internal drug discovery efforts are subject to regulation. Pharmaceutical products require lengthy and costly testing in animals and humans and regulatory approval by governmental agencies prior to commercialization. Approval of a drug candidate as safe and effective for use in humans is never certain and these agencies may delay or deny approval of the products for commercialization. Regulatory agencies may also delay or deny approval based on additional government regulation or administrative action or on changes in regulatory policy during the period of clinical trials in humans and regulatory review. Similar delays and denials may be encountered in foreign countries. None of our collaborators have obtained regulatory approval to manufacture and sell drug candidates owned by us or identified and/or developed under an agreement with us. If we and/or our collaborators cannot obtain this approval, we may not realize milestone or royalty payments based on commercialization goals for these drug candidates. Even if regulatory approval is obtained, clinical studies may be required after sales of a drug have begun. In addition, the identification of certain side effects after a drug is on the market may result in the subsequent withdrawal of approval, reformulation of a drug, additional preclinical and clinical trials and changes in labeling. Any of these events could delay or prevent us from generating revenue from the commercialization of these drugs and cause us to incur significant additional costs.

WE HAVE LIMITED CLINICAL DEVELOPMENT EXPERIENCE.

One of our business strategies is to develop select drug candidates potentially through Phase II clinical trials before out-licensing them to a pharmaceutical or biotechnology partner for further clinical development and commercialization. To date, we have filed one IND that the FDA has cleared for Phase I clinical testing, which we have not yet begun, and we have not yet conducted Phase II clinical trials. We have limited experience conducting clinical trials and obtaining regulatory approvals, and we may not be successful in some or all of these activities.

WE MAY NOT BE ABLE TO ACCELERATE THE DRUG DISCOVERY PROCESS.

One of our business strategies is to accelerate the drug discovery process to identify drug candidates using the Array Discovery Platform. It is uncertain whether we will be able to make the drug discovery process more efficient or create high quality drug candidates. Our ability to accelerate the drug discovery process depends on many factors, including the implementation of appropriate technologies, the development of effective new research tools and the performance and decision-making capabilities of our scientists. Our information-driven technology platform, which we believe allows our scientists to make better decisions, may not enable our scientists to make correct decisions or develop viable drug candidates.

IF WE DO NOT PROGRESS OUR PROPRIETARY DRUG DISCOVERY PROGRAMS AS ANTICIPATED, OUR REVENUE COULD BE NEGATIVELY IMPACTED.

We estimate the timing of a variety of preclinical, clinical, regulatory and other milestones for planning purposes, including when a drug candidate is expected to enter clinical trials, when a clinical trial will be completed or when an application for regulatory approval will be filed. Some of our estimates are included in this prospectus. We base our estimates on facts that are currently known to us and on a variety of assumptions, many of which are beyond our control. If we or our collaborators do not achieve milestones when anticipated, our revenue may not grow as anticipated, which could cause our stock price to decline.

BECAUSE WE RELY ON A SMALL NUMBER OF COLLABORATORS FOR A SIGNIFICANT PORTION OF OUR REVENUE, IF ONE OR MORE OF OUR MAJOR COLLABORATORS TERMINATES OR REDUCES THE SCOPE OF THEIR AGREEMENT WITH US, OUR REVENUE MAY SIGNIFICANTLY DECREASE.

A relatively small number of collaborators account for a significant portion of our revenue. Merck & Co., Inc. and Eli Lilly and Company accounted for 20% and 14%, respectively, of our total revenue for the six months ended December 31, 2003. During the fiscal year ended June 30, 2003, revenue from ICOS Corporation, Merck and Eli Lilly accounted for 21%, 15% and 12%, respectively, of our total revenue. Our agreements with ICOS and Merck both concluded as of December 31, 2003, and our agreement with Eli Lilly terminates in March 2005, or earlier upon payment of a termination fee. We expect that revenue from a limited number of collaborators, including AstraZeneca and Genentech, will account for a large portion of our revenue in future quarters. In general, our collaborators may terminate their contracts with us upon 30 to 90 days' notice for a number of reasons or, in some cases, for no reason. In addition, some of our major collaborators can determine the amount of products delivered and research or development performed under these agreements. As a result, if any one of our major collaborators cancels, declines to renew or reduces the scope of its contract with us, our revenue may decrease.

WE MAY NOT BE ABLE TO OFFER CERTAIN OF OUR RESEARCH TOOLS OR SERVICES THAT MEET THE REQUIREMENTS OF OUR COLLABORATORS OR OFFER THEM AT A COMPETITIVE PRICE.

Requirements for research tools and services, such as Optimer Building Blocks, Lead Generation Libraries or custom synthesis, vary from collaborator to collaborator, and collaborators are generally requiring compounds with higher purity levels, fewer compounds per library and lower prices. We may be unable to meet these requirements for some of our collaborators. Other companies may offer research tools and services that more closely meet our collaborators' requirements, or our collaborators may decide to fulfill some or all of their needs internally. In addition, domestic and international competition may increase, and as a result, we may not be price competitive for certain of our research tools and services. Some foreign chemistry service providers have significantly lower cost structures, primarily resulting from lower scientific salaries. These foreign chemistry service providers have made progress in recent years in obtaining significant contracts to provide customer designed custom screening library compounds to major pharmaceutical companies. During fiscal 2003, we increased the inventory reserves for our Lead Generation Libraries resulting in a non-cash charge of $4.1 million. We reduced the carrying values for these libraries in light of difficult market conditions and the resulting decline in Lead Generation Library revenue during the second half of fiscal 2003. We have since reduced our resources devoted to the production and sale of Lead Generation Libraries, and revenue from these libraries may continue to decline. Consequently, we are assessing the current level and value of our inventories and may determine that further increases in our inventory reserves are necessary. As of December 31, 2003, we had approximately $4.6 million in inventory related to Lead Generation Libraries.

WE MAY NOT BE ABLE TO RECRUIT AND RETAIN THE EXPERIENCED SCIENTISTS AND MANAGEMENT WE NEED TO COMPETE IN THE DRUG RESEARCH AND DEVELOPMENT INDUSTRY.

We have 250 employees as of April 1, 2004, and our future success depends upon our ability to attract, retain and motivate highly skilled scientists and management. Our ability to attract new collaborators and retain, renew and expand existing collaborations depends on our ability to hire and retain scientists with the skills necessary to provide appropriate drug discovery expertise. We compete with pharmaceutical and biotechnology companies, contract research companies and academic and research institutions to recruit scientists. We may not be successful in attracting new scientists or management or in retaining or motivating our existing personnel.

Our future success also depends on the personal efforts and abilities of the principal members of our senior management and scientific staff to provide strategic direction, manage our operations and maintain a cohesive and stable environment. In particular, we rely on the services of Robert E. Conway, our Chief Executive Officer; Dr. Kevin Koch, our President and Chief Scientific Officer; Dr. David L. Snitman, our Chief Operating Officer and Vice President, Business Development; Dr. Anthony D. Piscopio, our Vice President, Chemistry and Director of Process Chemistry; R. Michael Carruthers, our Chief Financial Officer; and John R. Moore, our Vice President and General Counsel. We have employment agreements with all of the above personnel that are terminable upon 30 days' prior notice. If we cannot attract and retain qualified scientists and management, we will not be able to continue to provide or expand our drug discovery offerings.

WE MAY NOT BE ABLE TO MEET THE DELIVERY AND PERFORMANCE REQUIREMENTS SET FORTH IN OUR COLLABORATION AGREEMENTS.

In order to maintain our current collaborative relationships and to meet the performance and delivery requirements in our agreements, we must be able to provide drug discovery capabilities at appropriate levels, with acceptable quality and at an acceptable cost. Our ability to deliver the drug

discovery capabilities we offer to our collaborators is limited by many factors, including the difficulty of the chemistry and biology, the lack of predictability in the scientific process and having adequate scientific expertise. The inability to meet our existing or future contractual commitments may result in delayed or lost revenue, loss of collaborators or failure to expand our existing relationships.

OUR QUARTERLY OPERATING RESULTS COULD FLUCTUATE SIGNIFICANTLY.

Entering into drug discovery collaborations typically involves significant technical evaluation and/or commitment of capital by our collaborators. Accordingly, negotiation can be lengthy and is subject to a number of significant risks, including collaborators' budgetary constraints and internal acceptance reviews. In addition, some of our collaborators can influence when we deliver products and perform services under their contracts with us. Due to these factors, our operating results could fluctuate significantly from quarter to quarter. In addition, we may experience significant fluctuations in quarterly operating results due to factors such as general and industry-specific economic conditions that may affect the research and development expenditures of pharmaceutical and biotechnology companies.

Due to the possibility of fluctuations in our revenue and expenses, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. Our operating results in some quarters may not meet the expectations of stock market analysts and investors. If we do not meet analysts' and/or investors' expectations, our stock price could decline.

OUR cGMP AND PHARMACOLOGY FACILITIES AND PRACTICES MAY FAIL TO COMPLY WITH GOVERNMENT REGULATIONS.

All facilities and manufacturing processes used in the production of Active Pharmaceutical Ingredients for clinical use in the United States must be operated in conformity with cGMP requirements, as established by the FDA. Our cGMP facility and practices are subject to periodic regulatory inspections to ensure compliance with cGMP requirements. In addition, we could be required to comply with specific requirements of our collaborators, which may exceed FDA requirements. Failure on our part to comply with applicable regulations and specific requirements of our collaborators could result in the termination of ongoing research or the disqualification of data for submission to regulatory authorities. Material violations of cGMP requirements could result in additional regulatory sanctions and, in severe cases, could result in a mandated closing of our cGMP facility.

In addition, our pharmacology facility may be subject to the United States Department of Agriculture (USDA) regulations for certain animal species. Failure on our part to comply with applicable regulations and specific requirements of our collaborators could result in the termination of ongoing pharmacology research. Material violations of USDA requirements could result in additional regulatory sanctions and, in severe cases, could result in a mandated closing of our pharmacology facility for certain species.

OUR DEVELOPMENT, TESTING AND MANUFACTURE OF DRUG CANDIDATES MAY EXPOSE US TO PRODUCT LIABILITY LAWSUITS.

We develop, test and manufacture drug candidates generally intended for use in humans. Our drug discovery activities that result in the future manufacture and sale of drugs by our collaborators expose us to the risk of liability for personal injury or death to persons using these drugs. We may be required to pay substantial damages or incur legal costs in connection with defending any of these product liability claims, or we may not receive revenue from expected royalty or milestone payments if the commercialization of a drug is limited or ceases as a result of such claims. We have product liability insurance that contains customary exclusions and provides coverage up to $3.0 million per occurrence

and in the aggregate, which we believe is customary in our industry. However, our product liability insurance does not cover every type of product liability claim that we may face or loss we may incur, and may not adequately compensate us for the entire amount of covered claims or losses or for the harm to our business reputation. We may be unable to acquire or maintain additional or maintain our current insurance policies at acceptable costs or at all.

IF OUR USE OF CHEMICAL AND HAZARDOUS MATERIALS VIOLATES APPLICABLE LAWS OR REGULATIONS OR CAUSES PERSONAL INJURY WE MAY BE LIABLE FOR DAMAGES.

Our drug discovery activities, including the analysis and synthesis of chemical compounds, involve the controlled use of chemicals, including flammable, combustible, toxic and radioactive materials that are potentially hazardous. Our use, storage, handling and disposal of these materials is subject to federal, state and local laws and regulations, including the Resource Conservation and Recovery Act, the Occupational Safety and Health Act and local fire codes, and regulations promulgated by the Department of Transportation, the Drug Enforcement Agency, the Department of Energy, the Colorado Department of Public Health and Environment, and the Colorado Department of Human Services, Alcohol and Drug Abuse Division. We may incur significant costs to comply with these laws and regulations in the future. In addition, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident, we could be liable for any damages that result, and any such liability could exceed our net worth and limit our ability to raise additional capital.

OUR OPERATIONS COULD BE INTERRUPTED BY DAMAGE TO OUR SPECIALIZED LABORATORY FACILITIES.

Our operations are dependent upon the continued use of our highly specialized laboratories and equipment in Boulder and Longmont, Colorado. Catastrophic events, including fires or explosions, could damage our laboratories, equipment, scientific data, work in progress or inventories of chemical compounds and may materially interrupt our business. We employ safety precautions in our laboratory activities in order to reduce the likelihood of the occurrence of these catastrophic events; however, we cannot eliminate the chance that such an event will occur. The availability of laboratory space in these locations is limited, and rebuilding our facilities could be time consuming and result in substantial delays in fulfilling our agreements with our collaborators. We maintain business interruption insurance in the amount of $12.0 million to cover continuing expenses and lost revenue caused by such occurrences. However, this insurance does not compensate us for the loss of opportunity and potential harm to customer relations that our inability to meet our collaborators' needs in a timely manner could create.

Risks Related to Operating in Our Industry

THE CONCENTRATION OF THE PHARMACEUTICAL AND BIOTECHNOLOGY INDUSTRY AND ANY FURTHER CONSOLIDATION COULD REDUCE THE NUMBER OF OUR POTENTIAL COLLABORATORS.

There are a limited number of pharmaceutical and biotechnology companies, and these companies represent a significant portion of the market for our capabilities. The number of our potential collaborators could decline even further through consolidation among these companies. If the number of our potential collaborators declines even further, they may be able to negotiate greater rights to intellectual property they license from us, price discounts or other terms that are unfavorable to us.

CAPITAL MARKET CONDITIONS MAY REDUCE OUR BIOTECHNOLOGY COLLABORATORS' ABILITY TO FUND RESEARCH.

Traditionally, many unprofitable biotechnology companies have funded their research and development expenditures through raising capital in the equity markets. Declines and uncertainties in these markets have severely restricted raising new capital at times in the past and have affected these companies' ability to continue to expand or fund existing research and development efforts. If our current or future biotechnology collaborators are unable to raise sufficient capital to fund research and development expenditures, we may not be able to expand or maintain current revenue.

HEALTH CARE REFORM COULD REDUCE THE PRICES PHARMACEUTICAL AND BIOTECHNOLOGY COMPANIES CAN CHARGE FOR DRUGS THEY SELL WHICH, IN TURN, COULD REDUCE THE FUNDING THAT THEY HAVE AVAILABLE TO RETAIN OUR SERVICES.

We generate a majority of our revenue from contracts with pharmaceutical and biotechnology companies. We therefore depend upon the ability of pharmaceutical and biotechnology companies to earn profits on the drugs they market to devote substantial resources to the research and development of new drugs. Future legislation may limit the prices pharmaceutical and biotechnology companies can charge for the drugs they market. Such laws may have the effect of reducing the resources that pharmaceutical and biotechnology companies can devote to the research and development of new drugs, which could reduce the amount of services that we perform for them and our resulting revenue.

THE DRUG RESEARCH AND DEVELOPMENT INDUSTRY HAS A HISTORY OF PATENT AND OTHER INTELLECTUAL PROPERTY LITIGATION, AND WE MAY BE INVOLVED IN COSTLY INTELLECTUAL PROPERTY LAWSUITS.

The drug research and development industry has a history of patent and other intellectual property litigation, and we believe these lawsuits are likely to continue. Because we produce drug candidates for a broad range of therapeutic areas and provide many different capabilities in this industry, we face potential patent infringement suits by companies that control patents for similar drug candidates or capabilities or other suits alleging infringement of their intellectual property rights. In order to protect or enforce our intellectual property rights, we may have to initiate legal proceedings against third parties. Legal proceedings relating to intellectual property would be expensive, take significant time and divert management's attention from other business concerns. Further, if we do not prevail in an infringement lawsuit brought against us, we might have to pay substantial damages, including triple damages, and we could be required to stop the infringing activity or obtain a license to use the patented technology.

THE INTELLECTUAL PROPERTY RIGHTS WE RELY ON TO PROTECT OUR PROPRIETARY DRUG CANDIDATES AND THE TECHNOLOGY UNDERLYING OUR TOOLS AND TECHNIQUES MAY BE INADEQUATE TO PREVENT THIRD PARTIES FROM USING OUR TECHNOLOGY OR DEVELOPING COMPETING CAPABILITIES OR TO PROTECT OUR INTERESTS IN OUR PROPRIETARY DRUG CANDIDATES.

Our success will depend in part on our ability to protect patents and maintain the secrecy of proprietary processes and other technologies we develop for the testing and synthesis of chemical compounds in the drug discovery process. In addition, one of our business strategies is to develop our own proprietary drug candidates and enter into collaborations with pharmaceutical and biotechnology companies for the development of these drug candidates. In order to protect our rights to our proprietary drug candidates, we must obtain and maintain the intellectual property rights to such drug candidates. We currently have six issued United States patents and 20 patent applications on file with the United States Patent and Trademark Office. We have six international patent applications and 36 patent applications filed in foreign countries that correspond to U.S. patents or patent applications.

Any patents that we may own or license now or in the future may not afford meaningful protection for our drug candidates or our technology and tools. Our efforts to enforce and maintain our intellectual property rights may not be successful and may result in substantial costs and diversion of management time. In addition, other companies may challenge our patents and, as a result, these patents could be narrowed, invalidated or rendered unenforceable, or we may be forced to stop using the technology covered by these patents or to license the technology from third parties. In addition, current and future patent applications on which we depend may not result in the issuance of patents in the United States or foreign countries. Even if our rights are valid, enforceable and broad in scope, competitors may develop drug candidates or other products based on similar research or technology that is not covered by our patents.

In addition to patent protection, we also rely on copyright and trademark protection, trade secrets, know-how, continuing technological innovation and licensing opportunities. In an effort to maintain the confidentiality and ownership of our trade secrets and proprietary information, we require our employees, consultants and advisors to execute confidentiality and proprietary information agreements. However, these agreements may not provide us with adequate protection against improper use or disclosure of confidential information and there may not be adequate remedies in the event of unauthorized use or disclosure. Furthermore, we may from time to time hire scientific personnel formerly employed by other companies involved in one or more areas similar to the activities we conduct. In some situations, our confidentiality and proprietary information agreements may conflict with, or be subject to, the rights of third parties with whom our employees, consultants or advisors have prior employment or consulting relationships. Although we require our employees and consultants to maintain the confidentiality of all proprietary information of their previous employers, these individuals, or we, may be subject to allegations of trade secret misappropriation or other similar claims as a result of their prior affiliations. Finally, others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets. Our failure or inability to protect our proprietary information and techniques may inhibit or limit our ability to exclude certain competitors from the market.

THE DRUG RESEARCH AND DEVELOPMENT INDUSTRY IS HIGHLY COMPETITIVE, AND WE COMPETE WITH SOME COMPANIES THAT OFFER A BROADER RANGE OF CAPABILITIES AND HAVE BETTER ACCESS TO RESOURCES THAN WE DO.

The pharmaceutical and biotechnology industries are characterized by rapid and continuous technological innovation. We compete with companies worldwide that are engaged in the research and discovery of drug candidates for licensing, co-development and commercialization, including Ariad Pharmaceuticals Inc; deCODE genetics Inc; Exelixis Inc; Gilead Sciences, Inc.; Lexicon Genetics Inc; Tularik Inc; and Vertex Pharmaceuticals Incorporated. Some of our competitors offer a broader range of capabilities and have greater access to financial, technical, scientific, business development, recruiting and other resources than we do. Their access to greater resources may allow them to develop processes or technologies that would render our technologies obsolete or uneconomical, or products that are more effective, safer or less costly than products we develop or for which they obtain FDA approval more rapidly than we do. We anticipate that we will face increased competition in the future as new companies enter the market and advanced technologies become available.

Risks Related to Our Stock and the Offering

OUR OFFICERS AND DIRECTORS HAVE SIGNIFICANT CONTROL OVER US AND THEIR INTERESTS MAY DIFFER FROM THOSE OF OUR STOCKHOLDERS.

At December 31, 2003, our directors and officers beneficially owned or controlled approximately 16% of our common stock. Individually and in the aggregate, these stockholders significantly influence our management, affairs and all matters requiring shareholder approval. These stockholders may vote

their shares in a way with which other stockholders do not agree. In particular, this concentration of ownership may have the effect of delaying, deferring or preventing an acquisition of us and may adversely affect the market price of our common stock.

BECAUSE OUR STOCK PRICE MAY BE VOLATILE, OUR STOCK PRICE COULD EXPERIENCE SUBSTANTIAL DECLINES.

The market price of our common stock has historically experienced and may continue to experience volatility. The high and low closing sale prices for our common stock were $9.34 and $3.10, respectively, during the nine months ended March 31, 2004, and were $9.60 and $2.26, respectively, in fiscal 2003. Our quarterly operating results, the success or failure of our internal drug discovery efforts, changes in general conditions in the economy or the financial markets and other developments affecting our competitors or us could cause the market price of our common stock to fluctuate substantially. This volatility and market declines over the past several years have affected the market prices of securities issued by many companies, often for reasons unrelated to their operating performance and may adversely affect the price of our common stock. In the past, securities class action litigation has often been instituted following periods of volatility in the market price of a company's securities. A securities class action suit against us could result in potential liabilities, substantial costs and the diversion of management's attention and resources, regardless of whether we win or lose.

IF WE NEED BUT ARE UNABLE TO OBTAIN ADDITIONAL FUNDING TO SUPPORT OUR OPERATIONS, WE COULD EXPERIENCE A REDUCTION IN OUR ABILITY TO EXPAND OR BE FORCED TO REDUCE OUR OPERATIONS.

We have historically financed our operations in substantial part through the sale of our securities and revenue from our collaborators. The amount of cash we generated from our operating activities was $1.3 million for the six months ended December 31, 2003; we used $17.6 million for the fiscal year ended June 30, 2003 and generated $1.4 million for the fiscal year ended June 30, 2002. Although we anticipate that we will use more cash in our operating activities in future periods, we believe that our existing cash, cash equivalents and marketable securities and anticipated cash flow from existing collaboration agreements together with the proceeds of this public offering will be sufficient to support our current operating plan for at least the next 12 months. However, our current operating plan could change as a result of many factors, and we could require additional funding sooner than anticipated.

To the extent that the cash from our future operating activities is insufficient to meet our future capital requirements, we will have to raise additional funds to continue our proprietary research and development. We may not be able to raise funds on favorable terms, if at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the issuance of those securities would result in dilution to our stockholders. Moreover, incurring debt financing could result in a substantial portion of our operating cash flow being dedicated to the payment of principal and interest on such indebtedness, could render us more vulnerable to competitive pressures and economic downturns and could impose restrictions on our operations. If adequate funds are not available, we may be required to curtail operations significantly or to obtain funds through other arrangements on unattractive terms.

BECAUSE WE DO NOT INTEND TO PAY DIVIDENDS, STOCKHOLDERS WILL BENEFIT FROM AN INVESTMENT IN OUR COMMON STOCK ONLY IF IT APPRECIATES IN VALUE.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain our future earnings, if any, to finance the expansion of our business and do not expect to pay any cash dividends in the foreseeable future. As a result, the success of an investment in our common

stock will depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

THE ABILITY OF OUR STOCKHOLDERS TO CONTROL OUR POLICIES AND EFFECT A CHANGE OF CONTROL OF OUR COMPANY IS LIMITED, WHICH MAY NOT BE IN THE BEST INTERESTS OF OUR STOCKHOLDERS.

There are provisions in our certificate of incorporation and bylaws that may discourage a third party from making a proposal to acquire us, even if some of our stockholders might consider the proposal to be in their best interests. These include the following provisions in our certificate of incorporation:

- Our certificate of incorporation provides for three classes of directors with the term of office of one class expiring each year, commonly referred to as a "staggered board." By preventing stockholders from voting on the election of more than one class of directors at any annual meeting of stockholders, this provision may have the effect of keeping the current members of our board of directors in control for a longer period of time than stockholders may desire.

- Our certificate of incorporation authorizes our board of directors to issue shares of preferred stock without stockholder approval and to establish the preferences and rights of any preferred stock issued, which would allow the board to issue one or more classes or series of preferred stock that could discourage or delay a tender offer or change in control.

In addition, our board of directors approved on August 2, 2001, a Rights Agreement, which could prevent or deter a potential unsolicited takeover of us by causing substantial dilution of an acquirer of 15% or more of our outstanding common stock. We are also subject to the business combination provisions of Section 203 of the Delaware General Corporation Law, which, in general, imposes restrictions upon acquirers of 15% or more of our stock. As a result, mergers and acquisitions of us that our stockholders may consider in their best interests may not occur.

FUTURE SALES OF OUR COMMON STOCK MAY DEPRESS OUR STOCK PRICE.

The market price of our common stock could decline as a result of sales of substantial amounts of our common stock in the public market after the closing of this offering, or the perception that these sales could occur. In addition, these factors could make it more difficult for us to raise funds through future offerings of common stock. There are 28,726,692 shares of common stock outstanding as of April 20, 2004. All of the shares sold in this offering, including shares issuable upon conversion or exercise of any preferred stock or warrants, will be freely transferable without restriction or further registration under the Securities Act of 1933.

We have an aggregate of 8,606,511 shares of common stock that have been registered or are freely tradeable under an exemption from registration and are reserved for issuance upon exercise of options granted or reserved for grant under our stock option plan and our employee stock purchase plan. Stockholders can sell these shares in the public market upon issuance, subject to restrictions under securities laws. The number of shares we have reserved for issuance under our stock option plan may increase based on our issued and outstanding shares of common stock and we may increase the number of shares reserved for issuance under our employee stock purchase plan. We may register such additional shares in the future. In addition, some of our existing stockholders will be entitled to register their shares of common stock after this offering.

USE OF PROCEEDS

Except as described in any prospectus supplement, we intend to use the net proceeds from the sale of our securities to fund our research and development efforts and for general corporate purposes, including working capital. We may also use a portion of the net proceeds to acquire or invest in businesses or technologies that are complementary to our business, although we have no present commitments or agreements to do so. Pending these uses, we intend to invest the net proceeds in investment-grade, interest-bearing securities.

PLAN OF DISTRIBUTION

We may sell the securities being offered by this prospectus separately or together through any of the following methods:

- directly to purchasers;
- through agents;
- to or through one or more underwriters or dealers;
- through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction; and
- through a combination of any of these methods of sale.

We may effect the distribution of the securities from time to time in one or more transactions:

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

We will describe the method of distribution of the securities as well as the public offering price and the net proceeds to us in the applicable prospectus supplement.

Agents. We may solicit offers to purchase the securities offered by this prospectus through agents we designate from time to time. We will name any agent involved in the offer or sale of the securities and set forth any commissions payable by us to an agent in the applicable prospectus supplement. Unless otherwise indicated in the prospectus supplement, any agent will be acting on a best efforts basis for the period of his or her appointment. Any agent may be deemed to be an "underwriter" of the securities as that term is defined in the Securities Act of 1933 (the "Securities Act").

Underwriters. If we use an underwriter or underwriters in the sale of securities, we will execute an underwriting agreement with the underwriter or underwriters at the time we reach an agreement for sale. The underwriter or underwriters will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of an underwriter or underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We will set forth in the prospectus supplement the names of the specific managing underwriter or underwriters, as well as any other underwriters, and the terms of the transactions, including compensation of the underwriters and dealers. This compensation may be in the form of discounts, concessions or commissions. We may use underwriters with whom we have a material relationship. Underwriters and others participating in any offering of the securities may engage in

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transactions that stabilize, maintain or otherwise affect the price of the securities. We will describe any such relationship and any of these activities in the prospectus supplement.

Dealers. If a dealer is used in the sale of the securities, an underwriter or we will sell securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. The prospectus supplement will set forth the name of the dealer and the terms of the transactions.

Direct Sales. We may directly solicit offers to purchase the securities, and we may sell directly to institutional investors or others. These persons may be deemed to be underwriters within the meaning of the Securities Act with respect to any resale of the securities. The prospectus supplement will describe the terms of any direct sales, including the terms of any bidding or auction process.

Indemnification. Agreements we enter into with agents, underwriters and dealers may entitle them to indemnification by us against specified liabilities, including liabilities under the Securities Act, or to contribution by us to payments they may be required to make in respect of these liabilities. The prospectus supplement will describe the terms and conditions of indemnification or contribution.

Delayed Delivery Contracts. We may authorize underwriters, dealers and agents to solicit offers by certain institutional investors to purchase offered securities under contracts providing for payment and delivery on a future date specified in the prospectus supplement. The prospectus supplement will also describe the public offering price for the securities and the commission payable for solicitation of these delayed delivery contracts. Delayed delivery contracts will contain definite fixed price and quantity terms. The obligations of a purchaser under these delayed delivery contracts will be subject to only two conditions:

- that the institution's purchase of the securities at the time of delivery of the securities is not prohibited under the law of any jurisdiction to which the institution is subject; and

- that we shall have sold to the underwriters the total principal amount of the offered securities, less the principal amount covered by the delayed delivery contracts.

Stabilization Activities. To the extent permitted by and in accordance with Regulation M under the Securities Exchange Act of 1934 (the "Exchange Act"), in connection with an offering an underwriter may engage in over-allotments, stabilizing transactions, short covering transactions and penalty bids. Over-allotments involve sales in excess of the offering size, which creates a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would be otherwise. If commenced, the underwriters may discontinue any of these activities at any time.

Passive Market Making. To the extent permitted by and in accordance with Regulation M under the Exchange Act, any underwriters who are qualified market makers on the Nasdaq National Market may engage in passive market making transactions in the securities on the Nasdaq National Market during the business day prior to the pricing of an offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

Trading Markets and Listing. Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is quoted on the Nasdaq National Market. We may elect to list any other class or series of securities on any exchange, but we are not obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time. We cannot give any assurance as to the liquidity of the trading market for any of the securities we may offer under this prospectus.

No securities may be sold under this prospectus without delivery, in paper format, in electronic format on the Internet, or both, of the applicable prospectus supplement describing the method and terms of the offering.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and material provisions of our amended and restated certificate of incorporation and bylaws is only a summary. The description is qualified in its entirety by the complete provisions of our amended and restated certificate of incorporation and bylaws, which have been filed as exhibits to the registration statement on Form S-1 (file no. 333-45922) filed with the SEC on September 15, 2000. Our amended and restated certificate of incorporation authorizes the issuance of up to 60,000,000 shares of common stock, par value $0.001 per share, and 10,000,000 shares of preferred stock, par value $0.001 per share. As of April 20, 2004, 28,726,692 shares of common stock were issued and outstanding and no shares of preferred stock were issued and outstanding.

Listing

Our common stock is quoted on the Nasdaq National Market and traded under the symbol "ARRY".

Transfer Agent and Registrar

American Stock Transfer and Trust Company is our transfer agent and registrar.

Common Stock

Each holder of common stock is entitled to one vote for each share on all matters to be voted upon by the stockholders. Holders of common stock are not entitled to cumulative voting rights with respect to the election of directors. Subject to preferences that may be applicable to any preferred stock outstanding at the time, holders of common stock are entitled to receive ratable dividends, if any, as may be declared from time to time by the board of directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, holders of common stock would be entitled to share ratably in all assets remaining after the payment of liabilities and liquidation preferences on any outstanding preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are, and shares of common stock offered by us in this offering, when issued and paid for, will be, fully paid and nonassessable.

Preferred Stock

Our board of directors is authorized, without stockholder approval, to issue up to an aggregate of 10,000,000 shares of preferred stock in one or more series. The board of directors can fix the rights, preferences, privileges and restrictions of the preferred stock, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series of the designation of such series, without further vote or action by the stockholders.

We may amend from time to time our amended and restated certificate of incorporation to increase the number of authorized shares of preferred stock. Any such amendment would require the approval of the holders of a majority of the voting power of the shares entitled to vote thereon.

Future issuances of preferred stock may have the effect of delaying or preventing a change in our control or make removal of our management more difficult. Additionally, the issuance of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of the common stock or could adversely affect the rights and powers, including voting rights, of the holders of our common stock. The issuance of preferred stock could also cause the market price of our common stock to decline.

Registration Rights

The holders of up to approximately 3,429,232 shares of our common stock, or their transferees, will be entitled to require the registration of those shares under the Securities Act. Under an agreement with these holders, the holders of at least 30% of these shares may on up to two occasions require us to register their shares under the Securities Act, subject to some limitations described in the agreement. In addition, these holders may require us to register their shares on up to two occasions in any calendar year on a registration statement on Form S-3. These registration rights are subject to limitations and conditions, including the right of underwriters to limit the number of shares of common stock held by existing stockholders to be included in a registration. The registration rights as to any holder will terminate when all securities held by the holder entitled to registration rights can be sold within a three-month period under Rule 144 of the Securities Act and when the number of shares held by the holder is less than 1% of our outstanding capital stock on an as converted to common stock basis. In addition, we are generally required to bear all expenses of registration, including the reasonable fees of a single counsel acting on behalf of all selling stockholders, except underwriting discounts and selling commissions.

Registration of any shares with registration rights would result in those shares becoming freely tradeable without restriction under the Securities Act. Sales of these shares could have a material adverse effect on the trading price of our common stock.

Limitation of Liability of Directors and Officers

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation provides that our directors are not personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law, relating to unlawful dividends or unlawful stock purchases or redemptions; or
- for any transaction from which the director derives an improper personal benefit.

As a result of this provision, we and our stockholders may be unable to obtain monetary damages from a director for breach of his or her duty of care.

Indemnification

Our bylaws provide for the indemnification of our directors and officers to the fullest extent authorized by the Delaware General Corporation Law. We will indemnify a director or officer in connection with an action initiated by that person if the action was authorized by our board of

directors. The indemnification provided under our bylaws includes the right to be paid expenses in advance of the final disposition of a proceeding for which indemnification may be had if the director or officer agrees to repay all amounts paid in advance if it is ultimately determined that the director or officer is not entitled to be indemnified. Under our bylaws, if we do not pay a claim for indemnification within 60 days after we have received a written claim, the director or officer may bring an action to recover the unpaid amount of the claim. If successful, the director or officer also will be entitled to be paid the expense of prosecuting the action to recover these unpaid amounts.

Our bylaws also authorize us to purchase and maintain insurance on behalf of any person who is or was one of our directors, officers, employees or agents, or is or was serving at our request as a director, officer, employee, partner or agent of another corporation or other entity or enterprise, against any liability asserted against the person or incurred by the person in any of these capacities, or arising out of the person's fulfilling one of these capacities, and related expenses. We may obtain this insurance whether or not we would have the power to indemnify the person against the claim under the provisions of the Delaware General Corporation Law. We have purchased director and officer liability insurance on behalf of our directors and officers. The indemnification provisions under our amended and restated certificate of incorporation and bylaws are not exclusive of any other rights to indemnification under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

Anti-Takeover Provisions

General

Our amended and restated certificate of incorporation and bylaws contain some provisions that are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by our board of directors. In addition, provisions of Delaware law may hinder or delay an attempted takeover of us other than through negotiation with our board of directors. These provisions could have the effect of discouraging attempts to acquire us or remove incumbent management even if some or a majority of our stockholders believe this action is in their best interest, including attempts that might result in the stockholders receiving a premium over the market price for the shares of common stock they hold.

Classified Board

Our amended and restated certificate of incorporation provides for the division of our board of directors into three classes of directors serving staggered three-year terms. Our amended and restated certificate of incorporation further provides that the approval of the holders of at least two-thirds of the shares entitled to vote is necessary for the alteration, amendment or repeal of sections of our amended and restated certificate of incorporation relating to the election and classification of our board of directors, limitation of director liability, indemnification and the vote requirements for these amendments to our amended and restated certificate of incorporation. These provisions may have the effect of deterring hostile takeovers or delaying changes in control or management.

Removal of Directors and Vacancies

Our amended and restated certificate of incorporation provides that directors may be removed only with cause upon the affirmative vote of holders representing two-thirds of our outstanding shares. In addition, vacancies and newly created directorships resulting from any increase in the size of the board of directors may be filled only by the affirmative vote of a majority of the directors then in office, even if they do not constitute a quorum, or by the sole remaining director. These provisions would prevent stockholders from removing incumbent directors without cause and filling the resulting vacancies with their own nominees.

Advance Notice Provisions for Stockholder Proposals and Stockholder Nominations of Directors

Our bylaws establish an advance notice procedure with regard to the nomination, other than by the board of directors, of candidates for election to the board of directors and with regard to matters to be brought before an annual meeting of our stockholders by a stockholder. The stockholder's notice must contain specified information regarding the stockholder and its holdings, as well as about the director nominee and any business desired to be brought before the meeting. Although our bylaws do not give our board of directors any power to approve or disapprove stockholder nominations for the election of directors or any other business desired by stockholders to be conducted at an annual meeting, the bylaws:

- may have the effect of precluding a nomination for the election of directors or precluding the conduct of business at a particular annual meeting if the proper procedures are not followed; or

- may discourage or deter a third party from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of us, even if the conduct of this solicitation or the attempt to obtain control might be beneficial to us and our stockholders.

Special Stockholders' Meetings

Under our amended and restated certificate of incorporation and bylaws, special meetings of stockholders, unless otherwise prescribed by statute, may be called only by the board of directors, the chairperson, or the chief executive officer.

Stockholder Action Without a Meeting Only by Unanimous Written Consent

Our amended and restated certificate of incorporation provides that any action required or permitted to be taken at a stockholders' meeting may be taken without a meeting only by unanimous written consent.

Section 203 of the Delaware General Corporation Law

Under Section 203 of the Delaware General Corporation Law, we may not engage in a "business combination," which includes a merger or sale of more than 10% of our assets, with any "interested stockholder," namely, a stockholder who owns 15% or more of our outstanding voting stock, as well as affiliates and associates of any of these persons, for three years following the time that stockholder became an interested stockholder, unless:

- the transaction in which the stockholder became an interested stockholder is approved by our board of directors prior to the time the interested stockholder attained that status;

- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding those shares owned by persons who are directors and also officers; or

- at or after the time the stockholder became an interested stockholder the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Authorized but Unissued Shares

The authorization of undesignated preferred stock makes it possible for the board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any

attempt to change control of our company. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Rights Plan

On August 2, 2001, our board of directors adopted a Rights Agreement, pursuant to which all stockholders of record as of August 27, 2001 received rights to purchase shares of a newly created series of preferred stock. Each right entitles the registered holder to purchase from us one-one hundredth of a share of Series A Junior Participating Preferred Stock at an exercise price of $70.00 per share, subject to adjustment. The rights will become exercisable 10 business days after announcement that a person or group has acquired or obtained the right to acquire 15% or more of our outstanding common stock or 10 business days after commencement or announcement of a tender or exchange offer for 15% or more of our outstanding common stock. If a person or group acquires 15% or more of our outstanding common stock, all rights holders, except the acquiring person or group, will be entitled to acquire our common stock at a discount. In the event that we are acquired in a merger or other business combination transaction in which we are not the surviving corporation, or 50% or more of our assets or earning power is sold or transferred to a person or group who has acquired 15% or more of our outstanding capital stock, proper provision will be made so that each such holder of a right will have the right to receive, upon exercise of the right, shares of common stock of the acquiring company which at the time of the transaction will have a market value of two times the exercise price of the right.

Our board of directors may terminate the rights plan at any time, amend the rights plan without the approval of any holders of the rights or redeem the rights within 10 business days of the date a person or group acquires 15% or more of our outstanding capital stock. The rights expire on August 2, 2011.

The form of Rights Agreement specifying the terms of the rights, which includes the form of Certificate of Designation of the Series A Junior Participating Preferred Stock, the Summary of Rights to Purchase Series A Junior Participating Preferred Stock and the form of Rights Certificate, is attached as an exhibit to the Registration Statement on Form 8-A filed by Array with the SEC on August 3, 2001. The foregoing description of the rights is only a summary and is qualified in its entirety by reference to the complete text of the Rights Agreement.

DESCRIPTION OF WARRANTS

General

We may issue warrants for the purchase of shares of our common stock or preferred stock. Warrants may be issued independently or together with the shares of common stock or preferred stock offered by any prospectus supplement and may be attached to or separate from such shares. Further terms of the warrants will be set forth in the applicable prospectus supplement, including, where applicable, the following:

- the title of such warrants;
- the aggregate number of warrants;
- the price or prices at which the warrants will be issued;
- the designation, terms and number of shares of common stock or preferred stock purchasable upon exercise of the warrants;
- the designation and terms of the shares of common stock or preferred stock with which the warrants are issued and the number of warrants issued with such shares;

the date on and after which the warrants and the related common stock or preferred stock will be separately transferable, including any limitations on ownership and transfer of the warrants;

the price at which each share of common stock or preferred stock purchasable upon exercise of the warrants may be purchased;

any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants;

the dates on which the right to exercise the warrants shall commence and expire;

the minimum or maximum amount of warrants that may be exercised at any one time;

information with respect to book-entry procedures, if any;

a discussion of certain federal income tax consequences; and

any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder thereof to purchase for cash the number of shares of common stock at the exercise price as shall in each case be set forth in, or be determinable as set forth in, the applicable prospectus supplement. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Warrants may be exercised as set forth in the applicable prospectus supplement relating to the warrants offered thereby. Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will, as soon as practicable, forward the purchased securities. If less than all of the warrants represented by the warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Enforceability of Rights of Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as a warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, that holder's warrants.

LEGAL MATTERS

Hogan & Hartson L.L.P., Boulder, Colorado, will provide us with an opinion as to legal matters in connection with the securities offering.

EXPERTS

Ernst & Young LLP, independent auditors, have audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended June 30, 2003, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. We have incorporated our financial statements by reference in reliance on the report of Ernst & Young LLP, given on the authority of said firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. These documents may include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as Proxy Statements. Any documents that we subsequently file with the SEC will automatically update and replace the information previously filed with the SEC. Thus, for example, in the case of a conflict or inconsistency between information set forth in this prospectus and information incorporated by reference into this prospectus, you should rely on the information contained in the document that was filed later.

This prospectus incorporates by reference the documents listed below that we have previously filed (under File No. 001-16633) with the SEC and any additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

1. Our Annual Report on Form 10-K for the year ended June 30, 2003 filed with the SEC on September 26, 2003, as amended on Form 10-K/A filed with the SEC on October 1, 2003;

2. Our Definitive Proxy Statement on Schedule 14A for our annual meeting of stockholders, filed with the SEC on October 1, 2003;

3. Our Quarterly Reports on Form 10-Q for the periods ended September 30, 2003 and December 31, 2003, filed with the SEC on November 3, 2003 and February 2, 2004, respectively;

4. Our Current Reports on Form 8-K filed with the SEC on December 18, 2003, January 5, 2004, March 8, 2004 and April 5, 2004; and

5. The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on November 16, 2000, and the description of our preferred stock purchase rights contained in our Registration Statement on Form 8-A filed with the SEC on August 3, 2001, including any amendment or report filed for the purpose of updating such descriptions.

You can obtain a copy of any or all of these documents, including any exhibits thereto, at no cost, by visiting the Investor Relations section of our web site at *http://www.arraybiopharma.com* or by requesting them in writing or by telephone at the following address:

Array BioPharma Inc.
3200 Walnut Street
Boulder, Colorado 80301
(303) 381-6600
Attention: Investor Relations

See also the section entitled "Where You Can Find More Information" below.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act that registers the distribution of the securities offered under this prospectus. The registration statement, including the attached exhibits and schedules and the information incorporated by reference, contains important information about our company and the securities. The rules and regulations of the SEC allow us to omit from this prospectus certain information included in the registration statement. In addition, we file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy this information and the registration statement at the SEC's Public Reference Room located at 450 Fifth Street, N.W., Washington D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room.

In addition, any information we file with the SEC, including the registration statement and the documents incorporated by reference into this prospectus, and the exhibits thereto, is also available on the SEC's website at *http://www.sec.gov*. We also maintain a web site at *http://www.arraybiopharma.com*, which provides additional information about our company and through which you can also access our SEC filings. The information set forth on our web site is not part of this prospectus.