ARRAY BIOPHARMA INC
Form 424B5
February 08, 2012

Use these links to rapidly review the document
Table of Contents
TABLE OF CONTENTS

Table of Contents

Filed Pursuant to Rule 424(b)(5)
Registration File No. 333-178162

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.

SUBJECT TO COMPLETION, DATED FEBRUARY 8, 2012

PROSPECTUS SUPPLEMENT
(to Prospectus dated January 13, 2012)

Shares

Common Stock

We are offering shares of our common stock. Our common stock is quoted on The NASDAQ Global Market under the symbol "ARRY." The last reported sale price of our common stock on The NASDAQ Global Market was $3.28 per share on February 7, 2012.

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-7 of this prospectus supplement and incorporated by reference in this prospectus supplement and 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.

	Price per share	Total
Public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to us	$	$

Delivery of the shares of common stock is expected to be made on or about February , 2012. We have granted the underwriters an option for a period of 30 days to purchase up to an additional shares of our common stock solely to cover over-allotments. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $ and the total proceeds to us, before expenses, will be $.

Joint Book-Running Managers

Jefferies **Leerink Swann**

Co-Manager

Stifel Nicolaus Weisel

Prospectus Supplement dated February , 2012

Table of Contents

Table of contents

Prospectus supplement

About this Prospectus Supplement	S-1
Prospectus Supplement Summary	S-2
Risk Factors	S-7
Forward-Looking Statements	S-11
Use of Proceeds	S-12
Dilution	S-13
Price Range of Our Common Stock	S-14
Dividend Policy	S-15
Material United States Federal Tax Considerations to Non-U.S. Holders	S-16
Underwriting	S-20
Information Incorporated by Reference	S-27
Legal Matters	S-28
Experts	S-28

Prospectus

About This Prospectus	ii
Summary	1
Risk Factors	2
Special Note Regarding Forward-Looking Statements	2
Use of Proceeds	3
Description of Capital Stock	3
Description of Depositary Shares	8
Description of Warrants	11
Legal Ownership of Securities	13
Plan of Distribution	16
Legal Matters	18
Experts	18
Incorporation of Certain Information by Reference	18
Where You Can Find More Information	19
Disclosure of Commission Position on Indemnification for Securities Act Liability	19

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we authorize to be distributed to you. We have not, and the underwriters have not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus when making your investment decision. You should also read and consider the information in the documents we have referred you to in the sections of this prospectus supplement entitled "Information Incorporated by Reference" and of the prospectus entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

Table of Contents

About this Prospectus Supplement

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference. The second part is the accompanying prospectus, which gives more general information, some of which may not apply to this offering of common stock. To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or any document incorporated by reference, the information in this prospectus supplement shall control.

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 brand names, 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.

Table of Contents

Prospectus Supplement Summary

This summary does not contain all of the information that you should consider before investing in our common stock. Before making an investment in our common stock, you should read this entire prospectus supplement and the accompanying prospectus carefully, including the risk factors described under the heading "Risk Factors" in this prospectus supplement starting on page S-7, in our annual report on Form 10-K and in our quarterly reports on Form 10-Q, and the financial statements and other information incorporated by reference in this prospectus supplement and the accompanying prospectus.

Our Business

Array BioPharma is a biopharmaceutical company focused on the discovery, development and commercialization of targeted small-molecule drugs to treat patients afflicted with cancer and inflammatory diseases. We have four core proprietary clinical programs:

ARRY-614 for myelodysplastic syndromes

ARRY-520 for multiple myeloma

ARRY-797 for pain

ARRY-502 for asthma

We are also advancing ARRY-981, a drug currently in good laboratory practices (GLP) toxicology studies that targets GPR119 for diabetes, and expects to begin a Phase 1 study in the last quarter of fiscal 2012.

Wholly-Owned Development Pipeline

Table of Contents

In addition, we have ten partner-funded clinical programs, including two MEK inhibitors in Phase 2 trials, selumetinib which is partnered with AstraZeneca and MEK162 which is partnered with Novartis.

Partnered Development Pipeline

MEK inhibitors target the Ras-Raf-MEK-ERK pathway. Several cancers, including colorectal, non-small cell lung, pancreatic, ovarian and melanoma, demonstrate activation of this pathway. We believe that a therapeutic approach to block this pathway with a MEK inhibitor may provide an effective therapy in patients with cancers that harbor mutations in this pathway. In 2011 in the seven major global pharmaceutical markets, consisting of the United States, France, Germany, Italy, Spain, the U.K. and Japan, there were approximately 170,000 patients diagnosed with Kras mutated colorectal cancer, 160,000 with Kras mutated non-small cell lung cancer, 110,000 with pancreatic cancer (most of which harbor Kras mutations), 40,000 with ovarian (platinum resistant/refractory) cancer and 15,000 with melanoma (BRAF mutant).

Upcoming Milestones

Over the next 12 months, Array expects results to be reported from seven clinical trials being conducted by Array or its collaboration partners:

- Phase 2 final combination results for selumetinib plus docetaxel in patients with non-small cell lung cancer (top-line results were reported in September 2011)
- Phase 2 combination data for selumetinib plus DTIC in patients with melanoma
- Phase 2 data for MEK162 in patients with melanoma
- Phase 2 top-line data for ARRY-797 in patients with osteoarthritis pain

Phase 2 combination data for ARRY-520 plus dexamethasone in patients with multiple myeloma (MM)

Phase 1b combination data for ARRY-520 plus Velcade® (bortezomib) in patients with MM

Phase 1 dose escalation data (interim) for the new formulation of ARRY-614 in patients with myelodysplastic syndromes

Table of Contents

In addition, Array expects to report top-line results for a Phase 2 trial of ARRY-502 in asthma patients in the first quarter of calendar 2013.

Market Opportunity for Array Wholly-Owned Drugs

Myelodysplastic Syndromes (ARRY-614 dual p38/Tie-2 inhibitor)

Myelodysplastic syndromes (MDS) are a spectrum of diseases in which the bone marrow does not make enough normal blood cells. Patients with MDS develop severe anemia, and platelet and neutrophil cytopenias, due to bone marrow failure. As MDS progresses, patients require frequent blood and platelet transfusions and are prone to severe and fatal infections. Patients generally have high healthcare costs, up to $100,000 annually, due to frequent transfusions and supportive care. MDS primarily afflicts the elderly, with a median age at diagnosis of 70 years. In 2011, there were approximately 153,000 patients diagnosed with MDS in the seven major global pharmaceutical markets. Based on the International Prognostic Scoring System (IPSS) classification scheme, approximately 7,000 are classified as isolated del(5q), approximately 46,000 are classified as intermediate-2/high and approximately 100,000 are classified as intermediate-1/low. MDS is generally believed to be under-diagnosed and under-reported. As a result of increased awareness, diagnosis and therapies, the population of treated MDS patients is forecast to grow by over 12% annually from 2010 to 2017, and total sales of existing therapies are projected to increase from $653 million in 2010 to $1.5 billion in 2017 across the seven major pharmaceutical markets.

Multiple Myeloma (ARRY-520 KSP inhibitor)

Multiple Myeloma, or MM, is a hematological cancer in which malignant plasma cells are overproduced in the bone marrow, compromising the immune system. MM is the second most common hematologic cancer. Despite advances in therapy over the last ten years, it remains an incurable, fatal disease in all patients. In 2011, there were approximately 122,000 patients with MM in the seven major global markets. Of these patients, approximately 46,000 are on front-line therapies, approximately 51,000 have relapsed or refractory disease progression, and approximately 25,000 are dual-refractory.

Pain (ARRY-797 p38 inhibitor)

The prevalence of acute and sub-acute pain in major countries is approximately 815 million patients, and the total market for this category in 2011 was approximately $17.9 billion. The prevalence of patients with acute and sub-acute pain includes approximately 640 million patients with musculoskeletal pain and approximately 105 million patients with post-operative pain. The prevalence of chronic pain in major countries is approximately 245 million, and the total market for this category in 2011 was approximately $22.2 billion. The prevalence of patients with chronic pain includes approximately 160 million patients with osteoarthritis pain and approximately 30 million with lower back pain.

Asthma (ARRY-502 CRTh2 inhibitor)

The prevalence of persistent asthma in major countries is approximately 17.8 million patients and the total market for this category in 2011 was approximately $12.3 billion. The prevalence of patients with persistent asthma includes mild asthma with approximately 4.5 million patients representing an approximately $2.4 billion market, moderate asthma with approximately 6.7 million patients representing an approximately $5.1 billion market and severe asthma with approximately 6.6 million patients representing an approximately $4.8 billion market. Severe, refractory or difficult-to-treat asthma occurs in approximately 5 to 10 percent of all asthmatics.

Table of Contents

Our Corporate Information

Founded in 1998, we are headquartered in Boulder, Colorado. We became a public company in November 2000, and our stock is listed on The NASDAQ Global 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. Our website is located at *www.arraybiopharma.com*. We have not incorporated by reference into this prospectus supplement or the accompanying prospectus the information on our website, and you should not consider it to be a part of this document. Our website address is included in this document as an inactive textual reference only.

Table of Contents

The Offering

Issuer	Array BioPharma Inc.
Common stock we are offering	shares
Common stock to be outstanding after this offering	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 Global Market Symbol	ARRY
Transfer Agent	American Stock Transfer and Trust Company
Risk Factors	See "Risk Factors" beginning on page S-7 for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock.

The number of shares of our common stock to be outstanding after this offering is based on 61,548,615 shares of common stock outstanding as of December 31, 2011 and excludes:

- 8,166,651 shares issuable upon exercise of options outstanding as of December 31, 2011 at a weighted average exercise price of $5.87 per share;
- 12,890,639 shares of common stock available for future issuance under our stock option plan as of December 31, 2011;
- 723,948 shares of common stock available for future issuance under our employee stock purchase plan as of December 31, 2011;
- warrants outstanding as of December 31, 2011 to purchase 6,000,000 shares at an exercise price of $3.65 per share and 6,000,000 shares at an exercise price of $4.19 per share; and
- 10,135,000 shares of common stock that are issuable upon the conversion of 10,135 shares of Series B Convertible Preferred Stock outstanding as of December 31, 2011.

Unless otherwise indicated, all information in this prospectus supplement assumes that the underwriters will not exercise the over-allotment option granted to them by us.

Table of Contents

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 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, 2011, our directors and officers beneficially owned or controlled approximately 5.6% 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.

Our quarterly operating results could fluctuate significantly, which could cause our stock price to decline.

Our quarterly operating results have fluctuated in the past and are likely to fluctuate in the future. Entering into licensing or 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, we have no approved drugs on the market that generate recurring royalty income, and a significant portion of our revenue is attributable to up-front and milestone payments. The achievement of milestones that trigger milestone payments occurs infrequently and the payments are non-recurring. In addition, even if a partnership yields a commercial product, the products sales on which royalties would be based may be small or insignificant. Further, some of our collaborators can influence the timing of the achievement of milestones and when we deliver products and perform services, and therefore receive revenue, under their contracts with us making it difficult to predict or control our revenue. 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.

Table of Contents

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 bids for our common stock were $2.83 and $1.77, respectively, for the six months ended December 31, 2011, $3.58 and $2.06, respectively, in fiscal 2011, and $4.45 and $1.72, respectively, in fiscal 2010. Our quarterly operating results, the success or failure of our internal drug discovery efforts, developments or disputes concerning our patents or proprietary rights, changes in general conditions in the economy or the financial markets and other developments affecting our collaborators, our competitors or us could cause the market price of our common stock to fluctuate substantially. This volatility coupled with market declines in our industry 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 and are restricted in our ability to do so under our current credit agreement. 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.

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.

Table of Contents

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 were 61,548,615 shares of common stock and 10,135 shares of Series B Convertible Preferred Stock outstanding as of December 31, 2011. 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 21,781,238 shares of common stock remaining as of December 31, 2011 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.

We have broad discretion in the use of the net proceeds from this offering, and we may not use these proceeds effectively.

We have not determined the specific allocation of the net proceeds of this offering. Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not necessarily improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business or financial condition, cause the price of our common stock to decline and delay product development.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. After giving effect to the sale of shares of our common stock in this offering at the public offering price of $ per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $ per share in the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

A substantial number of shares of our outstanding common stock may be sold in this offering, which could cause the price of our common stock to decline.

In this offering, assuming the underwriter's option to purchase up to additional shares from us is exercised in full, we will sell shares, or approximately % of our outstanding common stock as of December 31, 2011. This sale and any future sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could adversely affect the price of our common stock. We cannot predict the effect, if any, that market sales of those shares of common stock or the availability of those shares of common stock for sale will have on the market price of our common stock.

Table of Contents

We will need to raise additional capital to support our future operations, which may involve financings that could result in substantial dilution to our stockholders and the creation of additional securities senior to our common stock.

The terms of this offering do not restrict our ability to offer additional shares of common stock or a new series of preferred stock. Our board of directors has the authority to establish the designation of shares of preferred stock that may be convertible into common stock without any action by our stockholders, and to fix the rights, preferences, privileges and restrictions, including voting rights, of such shares. Such shares of preferred stock may have rights, preferences and privileges senior to those of outstanding common stock and the issuance and conversion of any such preferred stock would further dilute the percentage ownership of our stockholders.

Table of Contents

Forward-Looking Statements

This prospectus supplement, the accompanying prospectus, the documents we have filed with the Securities and Exchange Commission that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering contain 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 and 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 expectations about future events, and, as a result, 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 are described under the caption "Risk Factors" set forth on page S-6 of this prospectus supplement and in documents we have filed with the Securities and Exchange Commission that are incorporated by reference and include, but are not limited to:

- our ability to continue to fund and successfully progress internal research and development efforts and to create effective, commercially viable drugs;
- our ability to effectively and timely conduct clinical trials in light of increasing costs and difficulties in locating appropriate trial sites and in enrolling patients who meet the criteria for certain clinical trials;
- 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 that must be achieved for Array to receive milestone payments and royalties;
- 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 on their drug discovery activities;
- our ability to out-license our proprietary candidates on favorable terms;
- our ability to attract and retain experienced scientists and management;
- our ability to attract and hire a Chief Executive Officer with the skills we are seeking;
- our ability to achieve and maintain profitability; and
- the use of proceeds from this offering.

All forward-looking statements represent our judgment as of the date of the document containing the statement. We undertake no obligation to update any forward-looking statement to reflect new information or future events or developments, except to the extent required by law.

Table of Contents

Use of Proceeds

Based on the public offering price of $ per share, we estimate that the net proceeds to us from this offering will be approximately $ million (or approximately $ million if the underwriter's 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 general working capital purposes. We may also use a portion of the net proceeds to repay or refinance existing indebtedness or other corporate borrowings, or 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.

Table of Contents

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 December 31, 2011, was approximately $(127.2) million, or $(2.07) 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 December 31, 2011. After giving effect to the sale by us of shares of common stock offered in this offering at the public offering price of $ 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 December 31, 2011 would have been approximately $ million, or $ per share of common stock. This represents an immediate increase in the net tangible book value of $ per share to our existing stockholders and an immediate and substantial dilution in the net tangible book value of $ per share of common stock to new investors. The following table illustrates this calculation on a per share basis:

As of December 31, 2011		
Assumed public offering price per share		$
Net tangible book value per share as of December 31, 2011	$ (2.07)	
Increase per share attributable to new investors	$	
As adjusted net tangible book value per share after this offering		$
Dilution per share to new investors		$

If the underwriters exercise their option to purchase additional shares in full, the as adjusted net tangible book value as of December 31, 2011 would have been $ per share, representing an increase to existing stockholders of $ per share, and there will be an immediate dilution of $ per share to new investors.

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 or warrants having a per share exercise price less than the per share offering price to the public in this offering. As of December 31, 2011, there were 61,548,615 shares of common stock outstanding, which does not include:

- 8,166,651 shares issuable upon exercise of options outstanding as of December 31, 2011 at a weighted average exercise price of $5.87 per share;
- 12,890,639 shares of common stock available for future issuance under our stock option plan as of December 31, 2011;
- 723,948 shares of common stock available for future issuance under our employee stock purchase plan as of December 31, 2011;
- warrants outstanding as of December 31, 2011 to purchase 6,000,000 shares at an exercise price of $3.65 per share and 6,000,000 shares at an exercise price of $4.19 per share; and
- 10,135,000 shares of common stock that are issuable upon the conversion of 10,135 shares of Series B Convertible Preferred Stock outstanding as of December 31, 2011.

Table of Contents

Price Range of Our Common Stock

Our common stock has been quoted on The NASDAQ Global 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 closing sales prices per share of our common stock as reported by The NASDAQ Global Market:

Fiscal Year Ending June 30, 2012	**High**	**Low**
First Quarter	$ 2.62	$ 1.95
Second Quarter	$ 2.83	$ 1.77

Fiscal Year Ended June 30, 2011	**High**	**Low**
First Quarter	$ 3.44	$ 2.67
Second Quarter	$ 3.58	$ 2.98
Third Quarter	$ 3.29	$ 2.70
Fourth Quarter	$ 3.21	$ 2.06

Fiscal Year Ended June 30, 2010	**High**	**Low**
First Quarter	$ 4.45	$ 2.38
Second Quarter	$ 2.81	$ 1.72
Third Quarter	$ 2.83	$ 2.24
Fourth Quarter	$ 4.02	$ 2.66

On February 7, 2012, the closing price of our common stock as reported by The NASDAQ Global Market was $3.28 per share. As of February 7, 2012, there were approximately 64 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.

Table of Contents

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. Additionally, we are currently restricted from paying any dividends under our credit facilities. 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.

Table of Contents

Material U.S. Federal Tax Considerations to Non-U.S. Holders

The following is a general discussion of the principal material U.S. federal income and estate tax considerations with respect to the acquisition, ownership and disposition of our common stock by a non-U.S. holder (as defined below) as of the date hereof. This discussion is not a complete analysis of all of the potential U.S. federal income and estate tax consequences relating to the ownership of our stock, nor does it address any tax consequences arising under any state, local, or non-U.S. tax laws, the U.S. federal gift tax rules or any other U.S. federal tax laws. Except where noted, this discussion deals only with a non-U.S. holder that holds our common stock as a capital asset within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended, or the Code (generally, property held for investment).

For purposes of this discussion, a "non-U.S. holder" means a beneficial owner of our common stock (other than a partnership) that is not any of the following for U.S. federal income tax purposes: (i) an individual who is a citizen or resident of the U.S., (ii) a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the U.S., any state thereof, the District of Columbia, or any political subdivision of the United States, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust if (1) its administration is subject to the primary supervision of a court within the U.S. and one or more U.S. persons have the authority to control all of its substantial decisions, or (2) it has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

If an entity classified as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will generally depend on the status of the partner and upon the activities of the partnership. Accordingly, if you are a partnership holding our common stock, or a partner in such a partnership, you should consult your tax advisors regarding the specific U.S. federal income tax consequences applicable to you.

This discussion is based upon provisions of the Code, rulings and judicial decisions as of the date hereof. Those authorities may be changed, perhaps retroactively, or be subject to differing interpretations, so as to result in U.S. federal income and estate tax consequences different from those summarized below. No ruling has been or will be sought from the Internal Revenue Service, or IRS, with respect to the matters discussed below, and there can be no assurance that the IRS will not take a contrary position regarding the tax consequences of the acquisition, ownership or disposition of shares of our common stock, or that any such contrary position would not be sustained by a court. This discussion does not address all aspects of U.S. federal income and estate taxes that may be relevant to non-U.S. holders in light of their personal circumstances or to non-U.S. holders who are subject to special rules, including without limitation banks, thrifts or other financial institutions; insurance companies; partnerships, S corporations or other pass-through entities; real estate investment trusts; regulated investment companies; former U.S. citizens or residents; "controlled foreign corporations" or "passive foreign investment companies"; corporations that accumulate earnings to avoid U.S. federal income tax; brokers, dealers or traders in securities, commodities or currencies; tax-exempt organizations; tax-qualified retirement plans; persons subject to the alternative minimum tax; persons that hold or receive shares of our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; persons that own, or are deemed to own, more than 5% of our outstanding common stock (except to the extent specifically set forth below); persons holding shares of our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment; and persons deemed to sell shares of our common stock under the constructive sale provisions of the Code. We cannot assure you that a change in law will not alter significantly the tax considerations that we describe in this discussion.

If you are considering the purchase of our common stock, you should consult your own tax advisors concerning the particular U.S. federal tax consequences to you of the ownership and disposition of the common stock, as well as the consequences to you arising under the laws of any other taxing jurisdiction, including any state, local or foreign income tax consequences.

Table of Contents

Dividends

Payments made on our common stock will generally constitute "dividends" for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and will first be applied against and reduce a holder's adjusted tax basis in our common stock, but not below zero. Any excess amounts will be treated as gain from the sale of our common stock.

We have never declared or paid cash dividends on our common stock and we do not intend to declare or pay cash dividends on our common stock in the foreseeable future. If we were to pay dividends in the future on our common stock, they would be subject to U.S. federal income tax in the manner described below.

Dividends paid to a non-U.S. holder of our common stock generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with the conduct of a U.S. trade or business by a non-U.S. holder and, where an income tax treaty applies, are attributable to a U.S. permanent establishment or fixed base of the non-U.S. holder, are not subject to this withholding tax, but instead are subject to U.S. federal income tax on a net income basis at, as the case may be, generally applicable individual or corporate graduated rates. Certain certification and disclosure requirements must be complied with in order for effectively connected income to be exempt from this withholding tax, including furnishing to us or our paying agent a properly completed and executed IRS Form W-8ECI (or successor form). Any such effectively connected dividends received by a foreign corporation may, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

A non-U.S. holder of our common stock who wishes to claim the benefit of an applicable treaty rate (and avoid backup withholding as discussed below) for dividends will be required to (a) properly complete and execute IRS Form W-8BEN (or successor form) and certify under penalty of perjury that such holder is not a U.S. person and is qualified for the reduced rate or (b) if the common stock is held through certain foreign intermediaries or other agents acting on the holder's behalf, satisfy the relevant certification requirements of applicable Treasury regulations. Non-U.S. holders must provide this certification to us or our paying agent prior to the payment of any dividends and it must be updated periodically. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to the agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. These forms must be periodically updated. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty and the manner of claiming the benefits of such treaty (including, without limitation, the need to obtain a U.S. taxpayer identification number).

A non-U.S. holder of our common stock that does not timely provide us or our paying agent with the required certification, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Gain on Disposition of Common Stock

A non-U.S. holder generally will not be subject to U.S. federal income tax with respect to gain recognized on a sale or other disposition of our common stock unless (i) the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the U.S. and, where a tax treaty applies, is attributable to a U.S. permanent establishment or fixed base of the non-U.S. holder, (in which case the net income basis taxation described above would apply, and, for a non-U.S. holder that is a foreign corporation, the branch profits tax described above may also apply), (ii) the non-U.S. holder is an individual who holds our

Table of Contents

common stock as a capital asset, is present in the U.S. for 183 or more days during the taxable year of the sale or other disposition and meets certain other requirements (in which case the gain would be subject to U.S. federal income tax at a flat 30% rate, or such lower rate as is specified by an applicable tax treaty, but may be offset by U.S. source capital losses even though the individual is not considered a resident of the U.S.), or (iii) we are or have been a "U.S. real property holding corporation," or USRPHC, for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the non-U.S. holder held the common stock.

Generally, a corporation is a USRPHC if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. We believe that we currently are not, and we do not anticipate becoming, a "USRPHC" for U.S. federal income tax purposes. If we are or become a USRPHC, and if our common stock is regularly traded on an established securities market at any time during the calendar year, only a non-U.S. holder who holds or held (at any time during the shorter of the five-year period preceding the date of disposition or the holder's holding period) more than 5% of our common stock will be subject to U.S. federal income tax on the disposition of the common stock. Such holder would be subject to regular U.S. federal income tax with respect to any gain recognized in generally the same manner as a U.S. person.

Federal Estate Tax

Common stock in a U.S. corporation, including Array, held by an individual who is a non-U.S. holder at the time of death will be considered U.S. situs property, will be included in the gross estate of the nonresident alien decedent for U.S. federal estate tax purposes, and, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax treaty provides otherwise.

Information Reporting and Backup Withholding

Generally, we must report annually to the IRS and to each non-U.S. holder the amount of dividends paid to such holder and the tax withheld (if any) with respect to such dividends, regardless of whether withholding was required. Copies of the information returns reporting such dividends and any withholding may also be made available to the tax authorities in the country in which the non-U.S. holder resides under the provisions of an applicable income tax treaty or agreement.

Under certain circumstances, the Code imposes backup withholding, currently at a 28% rate, on certain reportable payments. Backup withholding, however, generally will not apply to payments of dividends to a non-U.S. holder of our common stock if the holder is a foreign corporation, or if the non-U.S. holder furnishes to us or our paying agent the required certification under penalties of perjury as to its non-U.S. status, such as by providing a valid IRS Form W-8BEN or W-8ECI, or certain other requirements are met. Notwithstanding the foregoing, backup withholding may apply if either we have or our paying agent has actual knowledge, or reason to know, that the holder is a U.S. person that is not an exempt recipient.

Payments of the proceeds from a disposition by a non-U.S. holder of our common stock made by or through a non-U.S. office of a non-U.S. broker generally will not be subject to information reporting or backup withholding. However, information reporting (but not backup withholding) will apply to those payments if the broker does not have documentary evidence that the beneficial owner is a non-U.S. holder, an exemption is not otherwise established, and the broker is: (i) a U.S. citizen; (ii) a controlled foreign corporation for U.S. federal income tax purposes; (iii) a foreign person 50% or more of whose gross income is effectively connected with a U.S. trade or business for a specified three-year period; or (iv) a foreign partnership if at any time during its tax year (1) one or more of its partners are U.S. persons who hold in the aggregate more than 50% of the income or capital interest in such partnership or (2) it is engaged in the conduct of a U.S. trade or business.

Table of Contents

Payment of the proceeds from a non-U.S. holder's disposition of our common stock made by or through the U.S. office of a broker generally will be subject to information reporting and backup withholding unless the non-U.S. holder is a foreign corporation, or certifies as to its non-U.S. holder status under penalties of perjury, such as by providing a valid IRS Form W-8BEN or W-8ECI, or otherwise establishes an exemption from information reporting and backup withholding.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Foreign Accounts

Withholding taxes may apply to certain types of payments made to "foreign financial institutions" (as specially defined under the applicable rules under the Code) and certain other non-U.S. entities. The failure to comply with additional certification, information reporting and other specified requirements could result in a withholding tax being imposed on payments of dividends and sales proceeds to foreign intermediaries and certain non-U.S. holders. A 30% withholding tax is imposed on dividends on, or gross proceeds from the sale or other disposition of, shares of our common stock paid to a foreign financial institution or to a foreign non-financial entity, unless (i) the foreign financial institution undertakes certain diligence and reporting obligations or (ii) the foreign non-financial entity either certifies it does not have any substantial U.S. owners or furnishes identifying information regarding each substantial U.S. owner. If the payee is a foreign financial institution, it must enter into an agreement with the U.S. Treasury requiring, among other things, that it undertake to identify accounts held by certain U.S. persons or U.S.-owned foreign entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements.

Although this legislation currently applies to applicable payments made after December 31, 2012, in recent guidance, the IRS has indicated that Treasury Regulations will be issued providing that the withholding provisions described above will apply to payments of dividends on shares of our common stock made on or after January 1, 2014 and to payments of gross proceeds from a sale or other disposition of such stock on or after January 1, 2015. Prospective investors should consult their tax advisors regarding this legislation.

THE PRECEDING DISCUSSION OF U.S. FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, STATE, LOCAL AND FOREIGN TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

Table of Contents

Underwriting

Subject to the terms and conditions set forth in the underwriting agreement to be dated on or about February , 2012, between us and the underwriters named below, we have agreed to sell to the underwriters and the underwriters have severally agreed to purchase from us, the number of shares of common stock indicated in the table below:

Underwriter	Number of Shares
Jefferies & Company, Inc	
Leerink Swann LLC	
Stifel, Nicolaus & Company, Inc.	
Total	

Jefferies & Company, Inc. is acting as joint book-running manager of this offering and as representative of the underwriters named above.

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that they currently intend to make a market in the shares. However, the underwriters are not obligated to do so and may discontinue any market-making activities at any time without notice. No assurance can be given as to the liquidity of the trading market for the shares.

The underwriters are offering the shares subject to their acceptance of the shares from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per common share. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per common share to certain brokers and dealers. After the offering, the public offering price, concession and reallowance to dealers may be reduced by the representative. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such

Table of Contents

amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share	Total Without Option to Purchase Additional Shares	Total With Option to Purchase Additional Shares
Public offering price	$	$	$
Underwriting discounts and commissions paid by us	$	$	$
Proceeds to us, before expenses	$	$	$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $.

Listing

Our shares are listed on The NASDAQ Global Market under the trading symbol "ARRY."

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional shares of common stock at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We and each of our executive officers and directors have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-l(h) under the Securities Exchange Act of 1934, as amended, or
- otherwise dispose of any common stock, options or warrants to acquire shares, or securities exchangeable or exercisable for or convertible into shares currently or hereafter owned either of record or beneficially, or
- publicly announce an intention to do any of the foregoing for a period of 90 days after the date of this prospectus without the prior written consent of Jefferies & Company, Inc.

This restriction terminates after the close of trading of the shares on and including the 90 days after the date of this prospectus. However, subject to certain exceptions, in the event that either:

- during the last 17 days of the 90-day restricted period, we issue an earnings release or material news or a material event relating to us occurs, or
- prior to the expiration of the 90-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 90-day restricted period,

then in either case the expiration of the 90-day restricted period will be extended until the expiration of the 18-day period beginning on the date of the issuance of an earnings release or the occurrence of the

Table of Contents

material news or event, as applicable, unless Jefferies & Company, Inc. waives, in writing, such an extension.

Jefferies & Company, Inc. may, in its sole discretion and at any time or from time to time before the termination of the 90-day period, without public notice, release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, certain persons participating in the offering may engage in transactions, including overallotment, stabilizing bids, syndicate covering transactions or the imposition of penalty bids, which may have the effect of stabilizing or maintaining the market price of the shares at a level above that which might otherwise prevail in the open market. Overallotment involves syndicate sales in excess of the offering size, which creates a syndicate short position. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of our shares in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our shares or purchasing shares of our shares in the open market. In determining the source of shares to close out the covered short position, 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 option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our shares. 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 that there may be downward pressure on the price of the shares of our shares in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares on behalf of the underwriters for the purpose of fixing or maintaining the price of the shares. A syndicate covering transaction is the bid for or the purchase of shares on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the shares originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we, nor any of the underwriters makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our shares. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on The NASDAQ Global Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the

Table of Contents

completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

This prospectus supplement and the accompanying prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than this prospectus supplement and the accompanying prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus supplement or the accompanying prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Affiliations

Certain of the underwriters and their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The underwriters and certain of their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Disclaimers About Non-U.S. Jurisdictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (as defined below) (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, or the Relevant Implementation Date, an offer of our common stock to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to our common stock which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive if they have been implemented in the Relevant Member State:

a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

Table of Contents

b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;

c) to fewer than 100 natural or legal persons per Relevant Member State (other than qualified investors as defined in the Prospectus Directive); or

d) in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of our common stock to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common stock to be offered so as to enable an investor to decide to purchase or subscribe for our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression "Prospectus Directive" means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

United Kingdom

Shares of our common stock may not be offered or sold and will not be offered or sold to any persons in the United Kingdom other than to persons whose ordinary activities involve them acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or otherwise in circumstances which have not resulted or will not result in an offer to the public in the United Kingdom within the meaning of the Financial Services and Markets Act 2000, or the FSMA.

In addition, any invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) in connection with the issue or sale of shares of our common stock may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to us. Without limitation to the other restrictions referred to herein, this prospectus supplement and the accompanying prospectus are directed only at (1) persons outside the United Kingdom or (2) persons who:

a) are qualified investors as defined in section 86(7) of FSMA, being persons falling within the meaning of article 2.1(e)(i), (ii) or (iii) of the Prospectus Directive; and

b) are either persons who fall within article 19(1) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or Order, or are persons who fall within article 49(2)(a) to (d) ("high net worth companies, unincorporated associations, etc.") of the Order; or

c) to whom it may otherwise lawfully be communicated in circumstances in which Section 21(1) of the FSMA does not apply.

Without limitation to the other restrictions referred to herein, any investment or investment activity to which this prospectus supplement and the accompanying prospectus relate is available only to, and will be engaged in only with, such persons, and persons within the United Kingdom who receive this communication (other than persons who fall within (2) above) should not rely or act upon this communication.

Table of Contents

Italy

This prospectus supplement and the accompanying prospectus have not been and will not be filed with or cleared by the Italian securities exchange commission (Commissione Nazionale per le societa e la Borsa the "CONSOB") pursuant to Legislative Decree No. 58 of 24 February 1998 (as amended, the "Finance Law") and to CONSOB Regulation No. 11971 of 14 May 1999 (as amended, the "Issuers Regulation"). Accordingly, copies of this prospectus supplement and the accompanying prospectus or any other document relating to our common stock may not be distributed, made available or advertised in Italy, nor may our common stock be offered, purchased, sold, promoted, advertised or delivered, directly or indirectly, to the public other than (i) to Professional Investors (such being the persons and entities as defined pursuant to article 31(2) of CONSOB Regulation No. 11522 of 1 July 1998, as amended, the Intermediaries Regulation) pursuant to article 100 of the Finance Law; (ii) to prospective investors where the offer of our common stock relies on the exemption from the investment solicitation rules pursuant to, and in compliance with, the conditions set out by article 100 of the Finance Law and article 33 of the Issuers Regulation, or by any applicable exemption; provided that any such offer, sale, promotion, advertising or delivery of our common stock or distribution of this prospectus supplement and the accompanying prospectus, or any part thereof, or of any other document or material relating to our common stock in Italy is made: (a) by investment firms, banks or financial intermediaries authorized to carry out such activities in the Republic of Italy in accordance with the Finance Law, the Issuers Regulation, Legislative Decree No. 385 of 1 September 1993 (as amended, the "Banking Law"), the Intermediaries Regulation, and any other applicable laws and regulations; and (b) in compliance with any applicable notification requirement or duty which may, from time to time, be imposed by CONSOB, Bank of Italy or by any other competent authority.

Germany

Any offer or solicitation of securities within Germany must be in full compliance with the German Securities Prospectus Act (Wertpapierprospektgesetz WpPG). The offer and solicitation of securities to the public in Germany requires the publication of a prospectus that has to be filed with and approved by the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht BaFin). This prospectus supplement and the accompanying prospectus have not been and will not be submitted for filing and approval to the BaFin and, consequently, will not be published. Therefore, this prospectus supplement and the accompanying prospectus do not constitute a public offer under the German Securities Prospectus Act (Wertpapierprospektgesetz). This prospectus supplement, the accompanying prospectus and any other document relating to our common stock, as well as any information contained therein, must therefore not be supplied to the public in Germany or used in connection with any offer for subscription of our common stock to the public in Germany, any public marketing of our common stock or any public solicitation for offers to subscribe for or otherwise acquire our common stock. This prospectus supplement, the accompanying prospectus and other offering materials relating to the offer of our common stock are strictly confidential and may not be distributed to any person or entity other than the designated recipients hereof.

France

This prospectus supplement and the accompanying prospectus have not been prepared in the context of a public offering of financial securities in France within the meaning of Article L.411-1 of the French Code Monétaire et Financier and Title I of Book II of the Règlement Général of the Autorité des marchés financiers (the "AMF") and therefore has not been and will not be filed with the AMF for prior approval or submitted for clearance to the AMF. Consequently, the shares of our common stock may not be, directly or indirectly, offered or sold to the public in France and offers and sales of the shares of our common stock may only be made in France to qualified investors (investisseurs qualifiés) acting for their own, as defined in and in accordance with Articles L.411-2 and D.411-1 to D.411-4, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code Monétaire et Financier. None of this prospectus supplement, the accompanying

Table of Contents

prospectus or any other offering material may be released, issued or distributed to the public in France or used in connection with any offer for subscription on sale of the shares of our common stock to the public in France. The subsequent direct or indirect retransfer of the shares of our common stock to the public in France may only be made in compliance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code Monétaire et Financier.

Sweden

This is not a prospectus under, and has not been prepared in accordance with the prospectus requirements provided for in, the Swedish Financial Instruments Trading Act [lagen (1991:980) om handel med finasiella instrument] nor any other Swedish enactment. Neither the Swedish Financial Supervisory Authority nor any other Swedish public body has examined, approved, or registered this document.

Table of Contents

Information Incorporated by Reference

The Securities and Exchange Commission, or 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 (which shall not include information furnished under Item 2.02 or Item 7.01 of any Current Report on Form 8-K, including any financial statements or exhibits relating thereto and furnished pursuant to Item 9.01) between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

- Our Annual Report on Form 10-K for the fiscal year ended June 30, 2011 filed with the SEC August 12, 2011, including information incorporated by reference from our Definitive Proxy Statement on Schedule 14A for our annual meeting of stockholders, filed with the SEC on September 15, 2011;

- Our Quarterly Report on Form 10-Q for the period ended September 30, 2011 filed with the SEC on November 2, 2011, as amended on Form 10-Q/A filed with the SEC on November 3, 2011, and our Quarterly Report on Form 10-Q for the period ended December 31, 2011 filed with the SEC on February 2, 2012;

- Our Current Reports on Form 8-K filed with the SEC on July 13, 2011, August 9, 2011, August 17, 2011, September 8, 2011, September 30, 2011, November 1, 2011, December 12, 2011, December 12, 2011, December 20, 2011, January 17, 2012 and January 30, 2012; and

- 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-6, 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.

Table of Contents

Legal Matters

The validity of the common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon for us by Gross Hartman, LLC, Boulder, Colorado. Latham & Watkins LLP, Costa Mesa, California, is counsel for the underwriters in connection with this offering.

Experts

The financial statements of Array BioPharma Inc. as of June 30, 2010 and 2011, and for each of the years in the three-year period ended June 30, 2011, and management's assessment of the effectiveness of internal control over financial reporting as of June 30, 2011 have been incorporated by reference herein and in the registration statement in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

PROSPECTUS

ARRAY BIOPHARMA INC.

UP TO $150,000,000 OF
OUR COMMON STOCK
PREFERRED STOCK
DEPOSITARY
SHARES WARRANTS

We may offer from time to time up to $150,000,000 in total of any combination of the securities described in this prospectus. We may offer the common stock, preferred stock, depositary shares 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. Any preferred stock we sell may be sold as either shares of preferred stock or represented by depositary shares.

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 listed on the Nasdaq Global Market and traded under the symbol "ARRY." On November 21, 2011, the last reported sale price for our common stock was $2.36 per share.

An investment in our securities involves a high degree of risk. You should carefully consider the "Risk Factors" contained in any supplements to this prospectus and in our most recent annual report on Form 10-K and in our other filings made with the Securities and Exchange Commission, which are incorporated by reference in this prospectus. See "Risk Factors" on page 2 of 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 January 13, 2012

TABLE OF CONTENTS

	PAGE
About This Prospectus	ii
Summary	1
Risk Factors	2
Special Note Regarding Forward-Looking Statements	2
Use of Proceeds	3
Description of Capital Stock	3
Description of Depositary Shares	8
Description of Warrants	11
Legal Ownership of Securities	13
Plan of Distribution	16
Legal Matters	18
Experts	18
Incorporation of Certain Information by Reference	18
Where You Can Find More Information	19
Disclosure of Commission Position on Indemnification for Securities Act Liability	19

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, using a "shelf" registration process. Under this shelf process, we may from time to time offer up to $150,000,000 in any combination of the securities described in this prospectus. We may sell these securities either individually or as units consisting of one or more of such securities, each at prices and on terms to be determined at the time of sale. The common stock, preferred stock, depositary shares and warrants are collectively referred to in this prospectus as the "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 $150,000,000.

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, or information incorporated by reference in this prospectus or any prospectus supplement that is of a more recent date, 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." These documents do not contain an offer to sell or solicitation of an offer to buy the securities in any circumstance in which the offer or solicitation is unlawful. 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.

References in this prospectus 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 are the property of the holders of such trademarks and trade names.

SUMMARY

Our Business

We are a biopharmaceutical company focused on the discovery, development and commercialization of targeted small molecule drugs to treat patients afflicted with cancer and inflammatory diseases. Our proprietary drug development pipeline includes clinical candidates that are designed to regulate therapeutically important target pathways. In addition, leading pharmaceutical and biotechnology companies partner with us to discover and develop drugs across a broad range of therapeutic areas.

Our Corporate Information

Our principal executive offices are located at 3200 Walnut Street, Boulder, Colorado 80301 and our phone number is (303) 381-6600. We were founded in 1998 and became a public company in November 2000. 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. Our stock is listed on the NASDAQ Global Market under the symbol "ARRY."

Securities Registered Hereby that We May Offer

We may offer any of the following securities with a total value of up to $150,000,000 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;

depositary shares;

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

any combination of the foregoing securities.

We refer to our common stock, preferred stock, depositary shares and warrants collectively in this prospectus as the "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, including, to the extent applicable:

designation or classification;

aggregate offering price;

rates and times of payment of dividends, if any;

redemption, conversion or sinking fund terms, if any;

voting or other rights, if any;

conversion prices, if any; and

important federal income tax considerations.

Common Stock. We may offer shares of our common stock. Our common stock currently is listed on the Nasdaq Global 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. 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. The terms of the preferred stock we may offer under this prospectus and any prospectus supplement will be set forth in a certificate of designation relating to that series and will be incorporated by reference into the registration statement of which this prospectus is a part. We urge you to read the complete certificate of designation containing the terms of the applicable series of preferred stock, as well as the applicable prospectus supplement related to such series.

Depositary Shares. We may from time to time issue receipts for depositary shares representing fractional shares of our preferred stock. Any depositary shares that we sell under this prospectus will be evidenced by depositary receipts issued under a deposit agreement between us and a depositary with whom we deposit the shares of the applicable series of preferred stock that underlie the depositary shares that are sold. Subject to the terms of the deposit agreement, each holder of a depositary share will be entitled, in proportion to the applicable fraction of a share of the preferred stock underlying the depositary share, to all of the rights, preferences and privileges, and be subject to the qualifications and restrictions, of the preferred stock underlying that depositary share. We will incorporate by reference into the registration statement of which this prospectus is a part the form of deposit agreement, including a form of depositary receipt, that describes the terms of any depositary shares that we are offering before the issuance of the related depositary shares. We urge you to read the prospectus supplements related to any depositary shares being offered, as well as the complete depositary agreement and depositary receipt that contains the terms of the depositary shares.

Warrants. We may issue warrants for the purchase of shares of our common stock or preferred stock or depositary shares in one or more series. Warrants may be issued independently or together with the securities offered by any prospectus supplement and may be attached to or separate from such securities. Further terms of the warrants will be set forth in warrant certificates issued under warrant agreements between us and an agent for the warrant holders, which we will incorporate by reference into the registration statement of which this prospectus is a part, as well as in the applicable prospectus supplement relating to such warrants. We urge you to read the prospectus supplements related to the series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the applicable series of warrants.

RISK FACTORS

Investment in our securities involves risks. Prior to making a decision about investing in our securities, you should consider carefully the risk factors, together with all of the other information contained or incorporated by reference in this prospectus and any prospectus supplement, including any additional specific risks described in the section entitled "Risk Factors" contained in any supplements to this prospectus and in our most recent annual report on Form 10-K and in our quarterly reports on Form 10-Q filed with the SEC, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated herein by reference in their entirety. Each of these risk factors could adversely affect our business, operating results and financial condition, which may result in the loss of all or part of your investment.

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 as a result of many factors. These factors include, but are not limited to, our ability to continue to fund and successfully progress internal research and development efforts and to create effective, commercially viable drugs; our ability to effectively and timely conduct clinical trials in light of increasing costs and difficulties in locating appropriate trial sites and in enrolling patients who meet the criteria for certain clinical trials; 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 on their drug discovery activities; our ability to out-license our proprietary candidates on favorable terms; 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 tied to milestones and royalties; our ability to attract and retain experienced scientists and management; our ability to achieve and maintain profitability; and the risk factors set forth under the caption "Risk Factors" in our most recent annual report on Form 10-K and our quarterly reports on Form 10-Q, and any amendments thereto we file with the SEC, and in any supplements to this prospectus. The forward-looking statements contained herein represent our judgment as of the date of this prospectus. We undertake no duty or obligation to update any forward-looking statements to reflect the occurrence of events or circumstances after the date of such statements or of anticipated or unanticipated events that alter any assumptions underlying such statements.

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.

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, which has been filed as an exhibit to the registration statement on Form S-1 (file no. 333-45922) filed with the SEC on September 15, 2000, and the amendment thereto filed as an exhibit to the current report on Form 8-K filed with the SEC on November 6, 2007 (File No. 001-16633), the certificate of designation for our Series B Convertible Preferred Stock, which has been filed as an exhibit our Current Report on Form 8-K filed with the SEC and dated May 2, 2011 (File No. 001-16633), and our amended and restated bylaws, which have been filed as an exhibit to the current report on Form 8-K filed with the SEC on November 4, 2008 (File No. 001-16633). Our amended and restated certificate of incorporation authorizes the issuance of up to 120,000,000 shares of common stock, par value $0.001 per share, and 10,000,000 shares of preferred stock, par value $0.001 per share, of which our board of directors has designated 10,135 shares as Series B Convertible Preferred Stock. As of November 21, 2011, 61,104,459 shares of common stock were issued and outstanding and 10,135 shares of Series B Convertible Preferred Stock were issued and outstanding.

Listing

Our common stock is listed on the Nasdaq Global 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. To date, our board of directors has designated 10,135 shares of preferred stock as Series B Convertible Preferred Stock, the rights, preferences, privileges and restrictions of which are set forth in the certificate of designation for the Series B Convertible Preferred Stock, which we filed with the SEC on May 2, 2011 as an exhibit to a current report on Form 8-K. 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, or the designation of such series, without further vote or action by the stockholders.

We will fix the rights, preferences, privileges and restrictions of the preferred stock of each series in the certificate of designation relating to that series. We will incorporate by reference as an exhibit to the registration statement that includes this prospectus or as an exhibit to a current report on Form 8-K, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you to read the complete certificate of designation containing the terms of the applicable series of preferred stock, as well as the applicable prospectus supplement related to such series. The certificate of designation will include:

the title and stated value; the number of shares we are offering;

the liquidation preference per share;

the purchase price;

the dividend rate, period and payment date and method of calculation for dividends;

whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;

the procedures for any auction and remarketing, if any;

the provisions for a sinking fund, if any;

the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;

any listing of the preferred stock on any securities exchange or market;

whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;

voting rights, if any, of the preferred stock;

preemption rights, if any;

restrictions on transfer, sale or other assignment, if any;

whether interests in the preferred stock will be represented by depositary shares;

a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;

the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

If we issue shares of preferred stock under this prospectus, the shares will be fully paid and non-assessable and will not have, or be subject to, any preemptive or similar rights.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class on any proposed fundamental change in the rights of the preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

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.

We currently have 10,135 shares of our Series B Preferred Stock outstanding. Each share of Series B Preferred Stock is convertible into 1,000 shares of our common stock at any time at the option of the holder, provided that the holder will be prohibited from converting Series B Preferred Stock into shares of our common stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 9.985% of the total number of shares of our common stock then issued and outstanding. In the event of our liquidation, dissolution, or winding up, holders of our Series B Preferred Stock will receive a payment equal to $0.001 per share of Series B Preferred Stock before any proceeds are distributed to the holders of our common stock or any class of stock that is subsequently authorized and issued that ranks junior to the Series B Preferred Stock. Shares of Series B Preferred Stock will generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series B Preferred Stock will be required to amend the terms of the Series B Preferred Stock or the Certificate of Designations. The Series B Preferred Stock will not be entitled to receive any dividends, unless and until specifically declared by our Board of Directors.

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

Prior to our initial public offering and in connection with the sale and issuance of our Series A preferred stock in May 1998, and August 1998, our Series B preferred stock in November 1999, and our Series C preferred stock in August 2000 (all of which shares converted into shares of our common stock in connection with our initial public offering), we entered into an agreement with the investors in such financings providing for registration rights with respect to the shares of common stock, including those issuable upon conversion of each series of preferred stock, held and subsequently acquired by these investors. Currently, 2.5 million shares of our common stock are entitled to registration rights pursuant to

terms and conditions of this agreement. The registration rights under this agreement allow the holders of at least 30% of the shares of common stock held by such holders then outstanding to require us to register their shares under the Securities Act of 1933, as amended, or the Securities Act, on up to two occasions, subject to limitations described in the agreement. In addition, these holders can require us to include their shares in future registrations of our shares for our account or the account of another stockholder. These holders may also require us to register their shares on up to two occasions in any calendar year 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.

In connection with Facility Agreements we entered into with Deerfield Private Design Fund, L.P. and Deerfield Private Design International, L.P., healthcare investment funds, who we collectively refer to as the Deerfield Funds, we have issued warrants to purchase an aggregate of 12,000,000 shares of our common stock to the Deerfield Funds and entered into a Registration Rights Agreement dated May 15, 2009. Under the terms of the Registration Rights Agreement, we agreed to file a registration statement with the SEC to register the resale of the shares of the common stock subject to issuance upon the exercise of the warrants under the Securities Act of 1933. On August 31, 2009, we filed a registration statement on Form S-3 (File No. 333-161633), which we amended on Forms S-3/A filed on September 23, 2009 and on September 29, 2009, registering the shares issuable upon exercise of the warrants, and which the SEC declared effective as of October 9, 2009. 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, whether pursuant to Rule 144 under the Securities Act or an effective registration statement, 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.

DESCRIPTION OF DEPOSITARY SHARES

We may offer fractional shares of preferred stock rather than full shares of preferred stock, and, in that event, will issue receipts for depositary shares. Each of these depositary shares will represent a fraction, which will be set forth in the applicable prospectus supplement, of a share of the applicable series of preferred stock.

The shares of any series of preferred stock underlying any depositary shares that we may sell under this prospectus will be deposited under a deposit agreement between us and a depositary selected by us. Subject to the terms of the deposit agreement, each holder of a depositary share will be entitled, in proportion to the applicable fraction of a share of the preferred stock underlying the depositary share, to all of the rights, preferences and privileges, and be subject to the qualifications and restrictions, of the preferred stock underlying that depositary share.

The depositary shares will be evidenced by depositary receipts issued under a deposit agreement. Depositary receipts will be distributed to the holders of the depositary shares that are sold in the applicable offering. We will incorporate by reference into the registration statement of which this prospectus is a part the form of any deposit agreement, including a form of depositary receipt, that describes the terms of any depositary shares we are offering before the issuance of the related depositary shares. The following summaries of material provisions of the deposit agreement, the depositary shares and the depositary receipts are subject to, and qualified in their entirety by reference to, all of the provisions of the deposit agreement applicable to a particular offering of depositary shares. We urge you to read the prospectus supplements relating to any depositary shares that are sold under this prospectus, as well as the complete deposit agreement and depositary receipt.

Form

Pending the preparation of definitive depositary receipts, the depositary may, upon our written order, issue temporary depositary receipts substantially identical to the definitive depositary receipts but not in definitive form. These temporary depositary receipts entitle their holders to all of the rights of definitive depositary receipts. Temporary depositary receipts will then be exchangeable for definitive depositary receipts at our expense.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received with respect to the underlying preferred stock to the record holders of depositary shares in proportion to the number of depositary shares owned by those holders.

If there is a distribution other than in cash, the depositary will distribute property received by it to the record holders of depositary shares in proportion to the number of depositary shares owned by those holders, unless the depositary determines that it is not feasible to do so. If this occurs, the depositary may, with our approval, sell the property and distribute the net proceeds from the sale to those holders in proportion to the number of depositary shares owned by them.

Withdrawal of Underlying Preferred Stock

Except as otherwise provided in a prospectus supplement, holders may surrender depositary receipts at the principal office of the depositary and, upon payment of any unpaid amount due to the depositary, be entitled to receive the number of whole shares of underlying preferred stock and all money and other property represented by the related depositary shares. We will not issue any partial shares of preferred stock. If the holder delivers depositary receipts evidencing a number of depositary shares that represent more than a whole number of shares of preferred stock, the depositary will issue a new depositary receipt evidencing the excess number of depositary shares to the holder.

Redemption of Depositary Shares

If the preferred stock underlying any depositary shares we may sell under this prospectus is subject to redemption, the depositary shares will be redeemed from the proceeds received by the depositary resulting from any such redemption, in whole or in part, of that underlying preferred stock. The redemption price per depositary share will be equal to the applicable fraction of the redemption price per share payable with respect to the underlying preferred stock. Whenever we redeem shares of underlying preferred stock that are held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing the shares of underlying preferred stock so

redeemed. If fewer than all of the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or proportionately, as may be determined by the depositary.

Voting

Upon receipt of notice of any meeting at which holders of the preferred stock underlying any depositary shares that we may sell under this prospectus are entitled to vote, the depositary will mail the information contained in the notice to the record holders of the depositary shares. Each record holder of the depositary shares on the record date, which will be the same date as the record date for the underlying preferred stock, will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the amount of the underlying preferred stock represented by the holder's depositary shares. The depositary will then try, as far as practicable, to vote the number of shares of preferred stock underlying those depositary shares in accordance with those instructions, and we will agree to take all reasonable actions which may be deemed necessary by the depositary to enable the depositary to do so. The depositary will not vote the underlying preferred stock to the extent it does not receive specific instructions with respect to the depositary shares representing such preferred stock.

Conversion of Preferred Stock

If the prospectus supplement relating to any depositary shares that we may sell under this prospectus states that the underlying preferred stock is convertible into our common stock or other securities, the following will apply. The depositary shares, as such, will not be convertible into any of our securities. Rather, any holder of the depositary shares may surrender the related depositary receipts to the depositary with written instructions that direct us to cause conversion of the preferred stock represented by the depositary shares into or for whole shares of our common stock or other securities, as applicable. Upon receipt of those instructions and any amounts payable by the holder in connection with the conversion, we will cause the conversion using the same procedures as those provided for conversion of the underlying preferred stock. If only some of a holder's depositary shares are converted, a new depositary receipt or receipts will be issued to the holder for any depositary shares not converted.

Amendment and Termination of the Deposit Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may at any time be amended by agreement between us and the depositary. However, any amendment which materially and adversely alters the rights of the holders of depositary shares will not be effective until 90 days after notice of that amendment has been given to the holders. Each holder of depositary shares at the time any amendment becomes effective shall be deemed to consent and agree to that amendment and to be bound by the deposit agreement as so amended. The deposit agreement may be terminated by us or by the depositary only if all outstanding depositary shares have been redeemed or converted into any other securities into which the underlying preferred stock is convertible or there has been a final distribution, including to holders of depositary receipts, of the underlying preferred stock in connection with our liquidation, dissolution or winding up.

Charges of Depositary

We will pay all charges of the depositary, except for taxes and governmental charges and other charges as are expressly provided for in the deposit agreement to be for the account of the holders of depositary shares or persons other than ourselves who may deposit any underlying preferred stock with the depositary.

Reports

The depositary will forward to holders of depositary receipts all notices and reports from us that we deliver to the depositary and that we are required to furnish to the holders of the underlying preferred stock.

Limitation on Liability

Neither we nor the depositary will be liable if either of us is prevented or delayed by law or any circumstance beyond our control in performing our respective obligations under the deposit agreement. Our obligations and those of the depositary will be limited to performance of our respective duties under the deposit agreement without, in our case, negligence or bad faith or, in the case of the depositary, negligence or willful misconduct. We and the depositary may rely upon advice of counsel or accountants, or upon information provided by persons presenting the underlying preferred stock for deposit, holders of depositary receipts or other persons believed by us in good faith to be competent and on documents believed to be genuine.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering notice to us of its election to resign. We may remove the depositary at any time. Any resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of the appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least $50,000,000.

DESCRIPTION OF WARRANTS

General

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. The form for each type of warrant will be filed as an exhibit to the registration statement of which this prospectus is a part.

We may issue, together with other securities or separately, warrants to purchase preferred stock or common stock. We will issue the warrants under warrant agreements to be entered into between us and a bank or trust company, as warrant agent, all as shall be set forth in the applicable prospectus supplement. The warrant agent will act solely as our agent in connection with the warrants of the series being offered and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants.

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, preferred stock or depositary shares purchasable upon exercise of the warrants;
- the designation and terms of the securities with which the warrants are issued and the number of warrants issued with such securities;
- the date on and after which the warrants and the related securities will be separately transferable, including any limitations on ownership and transfer of the warrants;
- in the case of warrants to purchase common stock, preferred stock or depositary shares, the price at which each share of common stock, preferred stock or depositary share purchasable upon exercise of the warrants may be purchased;

11

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 in the case of warrants to purchase common stock, preferred stock or depositary shares, 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 securities 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.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Warrants may be exercised as set forth in the applicable prospectus supplement relating to the warrants offered thereby. Upon receipt of payment of the exercise price 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. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for 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.

Outstanding Warrants

As of November 21, 2011, there were outstanding warrants to purchase 6,000,000 shares of our common stock at an exercise price of $3.65 per share and warrants to purchase 6,000,000 shares of our common stock at an exercise price of $4.19 per share. The warrants were amended in May 2011 to extend the April 29, 2014 expiration date to June 30, 2016. The warrants are not exercisable to the extent such exercise would cause the holder thereof to beneficially own more than 9.98% of our outstanding capital stock. Such warrants were filed as an exhibit to an amendment to a current report on

12

Form 8-K/A we filed with the SEC on September 23, 2009 (File No. 001-16633), and the amendment to the warrants was filed as an exhibit to our current report on Form 8-K as of May 2, 2011 (File No. 001-16633).

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee, depositary or warrant agent maintain for this purpose as the "holders" of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as "indirect holders" of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary's book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its participants. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a book-entry security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

Street Name Holders

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in "street name." Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors

who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

Special Considerations For Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

how it handles securities payments and notices;

whether it imposes fees or charges;

how it would handle a request for the holders' consent, if ever required;

whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;

how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and

if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, The Depositary Trust Company, New York, New York, known as DTC, will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under "Special Situations When a Global Security Will Be Terminated." As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-

entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations For Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- An investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- An investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- An investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- An investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- The depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in a global security. We and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in a global security. We and the trustee also do not supervise the depositary in any way;
- The depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- Financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When A Global Security Will Be Terminated

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

The global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;

if we notify any applicable trustee that we wish to terminate that global security; or

if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

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.

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 above under "SUMMARY Securities Registered Hereby that We May Offer."

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, or 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 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, as amended, or 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 Global Market may engage in passive market making transactions in the securities on the Nasdaq Global 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 listed on the Nasdaq Global 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.

LEGAL MATTERS

Gross Hartman LLC, Boulder, Colorado, will provide us with an opinion as to certain legal matters in connection with the issuance and sale of the securities.

EXPERTS

The financial statements of Array BioPharma Inc. as of June 30, 2010 and 2011, and for each of the years in the three-year period ended June 30, 2011, and management's assessment of the effectiveness of internal control over financial reporting as of June 30, 2011 have been incorporated by reference herein and in the registration statement in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein and upon the authority of said firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN INFORMATION 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 with the SEC (under File No. 001-16633) 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.

- our Annual Report on Form 10-K for the fiscal year ended June 30, 2011 filed with the Securities and Exchange Commission on August 12, 2011;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended June 30, 2011 from our definitive proxy statement on Schedule 14A, filed with the Securities and Exchange Commission on September 15, 2011;
- our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2011 and filed with the Commission on November 2, 2011, as amended on Form 10-Q/A filed with the Securities and Exchange Commission on November 3, 2011;
- our Current Reports on Form 8-K, filed with the Securities and Exchange Commission on July 13, 2011, August 9, 2011, August 17, 2011, September 8, 2011, September 30, 2011 and November 1, 2011; and

the description of our common stock contained in our registration statement on Form 8-A filed with the Securities and Exchange Commission on November 16, 2000, including any amendments or reports filed for the purpose of updating such description.

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.

Statements contained in this 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 forms 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.

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 100 F Street, N.E., 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.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Table of Contents

Shares

Common Stock

PROSPECTUS SUPPLEMENT

Joint Book-Running Managers

Jefferies

Leerink Swann

Co-Manager

Stifel Nicolaus Weisel

February , 2012