

ARADIGM CORP  
Form 424B3  
August 16, 2011

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**Filed pursuant to Rule 424(b)(3)  
Registration No. 333-168770**

**PROSPECTUS**

**Aradigm Corporation**

**Up to 68,229,726 Shares of Common Stock**

This prospectus relates to the resale of up to 68,229,726 shares of our common stock, no par value per share, being offered by the selling shareholders identified in this prospectus, including their respective transferees, donees, pledgees or other successors in interest. These shares consist of (i) 34,702,512 outstanding shares of common stock issued in a private placement that closed on June 21, 2010, which we refer to in this prospectus as the June 2010 private placement, (ii) 7,527,214 outstanding shares of common stock that were issued upon exercise of warrants issued in the June 2010 private placement and (iii) 26,000,000 outstanding shares of common stock that were issued under a stock purchase agreement, dated as of July 30, 2010, by and among us and Novo Nordisk A/S, which we refer to in this prospectus as the Novo Nordisk stock purchase agreement. We will not receive any of the proceeds from the sale of common stock by the selling shareholders under this prospectus. We have agreed to bear the expenses (other than any underwriting discounts or commissions or agent's commissions) in connection with the registration of the common stock being offered under this prospectus by the selling shareholders.

The selling shareholders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling shareholders will be responsible for underwriting discounts or commissions or agent's commissions.

The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. See Plan of Distribution beginning on page 58 of this prospectus.

Our common stock is quoted on the OTC Bulletin Board under the symbol ARDM. The closing price for our common stock on August 12, 2011 was \$0.19 per share.

**Investing in our common stock involves risk. You should carefully consider the risk factors beginning on page 4 of this prospectus before making a decision to invest in our common stock.**

**You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus or any prospectus supplement. This prospectus is not an offer of these securities in any jurisdiction where an offer and sale is not permitted.**

**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 August 16, 2011

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**PROSPECTUS SUMMARY**

*This summary highlights material information about us that is described more fully elsewhere in this prospectus. It may not contain all of the information that you find important. You should carefully read this entire document, including the Risk Factors section beginning on page 4 of this prospectus and the financial statements and related notes to those statements appearing elsewhere in this prospectus before making a decision to invest in our common stock.*

**Overview**

We are an emerging specialty pharmaceutical company focused on the development and commercialization of drugs delivered by inhalation for the treatment of severe respiratory diseases by pulmonologists. Over the last decade, we invested a large amount of capital to develop drug delivery technologies, particularly the development of a significant amount of expertise in pulmonary drug delivery. We also invested considerable effort into the generation of a large volume of laboratory and clinical data demonstrating the performance of our AERx<sup>®</sup> pulmonary drug delivery platform and other proprietary technologies, including our ciprofloxacin formulations for inhalation. We have not been profitable since inception and expect to incur additional operating losses over at least the foreseeable future as we continue product development efforts, clinical trial activities, and possible sales, marketing and contract manufacturing efforts. To date, we have not had any significant product sales and do not anticipate receiving revenues from the sale of any of our products in the near term. As of June 30, 2011, we had an accumulated deficit of \$359.2 million. Historically, we have funded our operations primarily through public offerings and private placements of our capital stock, license fees and milestone payments from collaborators, proceeds from the January 2005 restructuring transaction with Novo Nordisk, borrowings from Novo Nordisk, the milestone and royalty payments associated with the sale of Intraject-related assets to Zogenix, proceeds from the June 2011 royalty financing transaction and interest earned on cash equivalents and short-term investments.

Over the last five years, our business has focused on opportunities in the development of drugs for the treatment of severe respiratory disease that could be developed by us and commercialized in the United States, or another significant territory such as the European Union (EU). It is our longer term strategy to commercialize our respiratory product candidates with our own focused marketing and sales force addressing pulmonary specialty doctors in the United States or in the EU, where we believe that a proprietary sales force will enhance the return to our shareholders. Where our products can benefit a broader population of patients in the United States or in other countries, we may enter into co-development, co-promotion or other marketing arrangements with collaborators, thereby reducing costs and increasing revenues through license fees, milestone payments and royalties. In selecting our proprietary development programs, we primarily seek drugs approved by the United States Food and Drug Administration (FDA) that can be reformulated for both existing and new indications in respiratory disease. Our intent is to use our pulmonary delivery methods and formulations to improve their safety, efficacy and convenience of administration to patients. We believe that this strategy will allow us to reduce cost, development time and risk of failure, when compared to the discovery and development of new chemical entities. Our lead development candidates are proprietary inhaled formulations, ARD-3100 (Lipoquin<sup>™</sup>) and ARD-3150 (Pulmaquin<sup>™</sup>), of the antibiotic ciprofloxacin that are delivered by inhalation for the management of infections associated with the severe respiratory diseases cystic fibrosis (CF) and non-cystic fibrosis bronchiectasis (BE). The formulations differ in the proportion of rapidly available and slow release ciprofloxacin. ARD-3150 uses the slow release liposomal formulation (ARD-3100) mixed with a small amount of ciprofloxacin dissolved in an aqueous medium. We received orphan drug designations for ARD-3100 for both of these indications in the U.S. and for cystic fibrosis in the European Union. We requested orphan drug designation from the FDA for ARD-3150 for the management of bronchiectasis and in June 2011 we were granted orphan drug designation for ciprofloxacin for inhalation for this indication. We may seek orphan drug

designation for other eligible product candidates we develop. We have reported the results of one successful Phase 2b trial with ARD-3100 and one successful Phase 2b trial with ARD-3150 in non-cystic fibrosis bronchiectasis and two successful Phase 2a trials with ARD-3100 in cystic fibrosis and non-cystic fibrosis bronchiectasis, respectively.

Pulmonary delivery by inhalation is already a widely used and well accepted method of administration of a variety of drugs for the treatment of respiratory diseases. Compared to other routes of administration, inhalation provides local delivery of the drug to the respiratory tract which offers a number of potential advantages, including

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rapid onset of action, less drug required to achieve the desired therapeutic effect, and reduced side effects because the rest of the body has lower exposure to the drug. We believe that there still are significant unmet medical needs in the respiratory disease market, both to replace existing therapies that over prolonged use in patients demonstrate reduced efficacy or increased side effects, as well as to provide novel treatments to patient populations and for disease conditions that are inadequately treated.

We believe that our proprietary formulation and delivery technologies and our experience in the development and management of pulmonary clinical programs uniquely position us to benefit from opportunities in the respiratory disease market as well as other pharmaceutical markets that would benefit from the efficient, non-invasive inhalation delivery of drugs.

**Corporate Information**

We were incorporated in California in 1991. Our principal executive offices and mailing address is 3929 Point Eden Way, Hayward, California 94545, and the main telephone number of our principal executive offices is (510) 265-9000. Our website address is [www.aradigm.com](http://www.aradigm.com).

**THE OFFERING**

This prospectus relates to the resale of up to 68,229,726 shares of our common stock, no par value per share, being offered by the selling shareholders identified in this prospectus, including their respective transferees, donees, pledgees or other successors in interest. These shares consist of (i) 34,702,512 outstanding shares of common stock issued in the June 2010 private placement, (ii) 7,527,214 outstanding shares of common stock that were issued upon exercise of warrants issued in the June 2010 private placement and (iii) 26,000,000 outstanding shares of common stock that were issued under the Novo Nordisk stock purchase agreement.

Common stock being offered by selling shareholders	68,229,726 shares(1)
Common stock outstanding prior to and after the offering	198,114,301 shares(2)
Use of proceeds	We will not receive any of the proceeds from the sale of common stock by the selling shareholders under this prospectus.
OTC Bulletin Board Symbol	ARDM
Risk Factors	The shares offered by this prospectus are speculative and involve a high degree of risk and investors purchasing these shares should not purchase these shares unless they can afford the loss of their entire investment. See Risk Factors beginning on page 4.

(1) Consists of (i) 34,702,512 outstanding shares of common stock issued in the June 2010 private placement, (ii) 7,527,214 outstanding shares of common stock that were issued upon exercise of warrants issued in the June 2010 private placement and (iii) 26,000,000 outstanding shares of common stock that were issued under the Novo Nordisk stock purchase agreement.

(2) As of August 1, 2011. Includes the shares of common stock being offered under this prospectus.





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**CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus contains forward-looking statements that are based on the current beliefs of management, as well as current assumptions made by, and information currently available to, management. All statements contained in this prospectus, other than statements that are purely historical, are forward-looking statements. Words such as anticipate, expect, intend, plan, believe, may, will, could, continue, seek, estimate, probably, potentially and similar expressions also identify forward-looking statements. These forward-looking statements are subject to risks and uncertainties that could cause our future actual results, performance or achievements to differ materially from those expressed in, or implied by, any such forward-looking statements as a result of certain factors, including but not limited to, those risks and uncertainties discussed in this section as well as in the section entitled Risk Factors in this prospectus and other reports filed with the United States Securities and Exchange Commission (the SEC). Forward-looking statements include our belief that our cash, cash equivalents and short-term investments as of June 30, 2011 and the proceeds from the July 2011 private placement will be sufficient to enable us to fund our operations through at least the second quarter of 2012, our expectation that we will incur operating losses for the foreseeable future, our anticipations regarding revenue, collaboration agreements and our longer-term strategy and our expectations regarding clinical trials and orphan drug designations.

These forward-looking statements and our business are subject to significant risks including, but not limited to, our ability to obtain additional financing or partnering agreements in order to fund Phase 3 clinical trials of our inhaled ciprofloxacin product candidates, our ability to obtain clearance from the FDA for conducting our inhaled ciprofloxacin Phase 3 clinical trials, our ability to implement our product development strategy, the success of product development efforts, obtaining and enforcing patents important to our business, clearing the lengthy and expensive regulatory approval process and possible competition from other products. Even if product candidates appear promising at various stages of development, they may not reach the market or may not be commercially successful for a number of reasons. Such reasons include, but are not limited to, the possibilities that the potential products may be found to be ineffective during clinical trials, may fail to receive necessary regulatory approvals, may be difficult to manufacture on a large scale, are uneconomical to market, may be precluded from commercialization by proprietary rights of third parties or may not gain acceptance from health care professionals and patients.

Investors are cautioned not to place undue reliance on the forward-looking statements contained herein, which speak only as of the date of the filing of this prospectus. We undertake no obligation to update these forward-looking statements in light of events or circumstances occurring after the date of the filing of this prospectus or to reflect the occurrence of unanticipated events.

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**RISK FACTORS**

*In addition to the other information contained in this prospectus, and risk factors set forth in the 2010 Annual Report on Form 10-K and our other filings with the SEC, the following risk factors should be considered carefully before you decide whether to buy, hold or sell our common stock. Our business, financial condition, results of operations and stock price could be materially adversely affected by any of these risks. Additional risks not presently known to us or that we currently deem immaterial may also impair our business, financial conditions, results of operations and stock price.*

*The risk factors included herein include any material changes to and supersede the risk factors associated with our business previously disclosed in Part I, Item 1A, Risk Factors of the 2010 Annual Report on Form 10-K. We have marked with a double asterisk (\*\*) those risk factors that reflect substantive changes from the risk factors included in the 2010 Annual Report on Form 10-K.*

**Risks Related to Our Business**

***We are an early-stage company.***

You must evaluate us in light of the uncertainties and complexities present in an early-stage company. All of our potential products are in an early stage of research or development. Our potential drug products require extensive research, development and pre-clinical and clinical testing. Our potential products also may involve lengthy regulatory reviews before they can be sold. Because none of our product candidates has yet received approval by the FDA, we cannot assure you that our research and development efforts will be successful, any of our potential products will be proven safe and effective or regulatory clearance or approval to sell any of our potential products will be obtained. We cannot assure you that any of our potential products can be manufactured in commercial quantities or at an acceptable cost or marketed successfully. We may abandon the development of some or all of our product candidates at any time and without prior notice. We must incur substantial up-front expenses to develop and commercialize products and failure to achieve commercial feasibility, demonstrate safety, achieve clinical efficacy, obtain regulatory approval or successfully manufacture and market products will negatively impact our business.

***\*\*We will need to raise additional capital and we may not be able to raise additional capital on a timely basis, on reasonable terms or at all.***

We believe our cash, cash equivalents and short-term investments as of June 30, 2011 and the proceeds from the July 2011 private placement will be sufficient to enable us to fund our operations through at least the second quarter of 2012. We currently have fewer than 2 million authorized unallocated common shares available for future equity financings and we may not be able to use common shares for future equity financings without shareholder approval. We will need to commit substantial funds to develop our product candidates and we may not be able to obtain sufficient funds on acceptable terms or at all, especially in light of the current difficult financing environment. If we are unable to obtain capital on acceptable terms, we may be required to defer our product development activities. Our operations to date have consumed substantial amounts of cash and have generated no significant direct product revenues. We expect negative operating cash flows to continue for at least the foreseeable future. Our future capital requirements will depend on many factors, including:

our progress in the application of our delivery and formulation technologies, which may require further refinement of these technologies;

the number of product development programs we pursue and the pace of each program;

our progress with formulation development;

the scope, rate of progress, results and costs of preclinical testing and clinical trials;

the time and costs associated with seeking and maintaining regulatory approvals;

our ability to outsource the manufacture of our product candidates and the costs of doing so;

the time and costs associated with establishing in-house resources to market and sell certain of our products;

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our ability to establish collaborative arrangements with others and the terms of those arrangements;  
the costs of preparing, filing, prosecuting, maintaining and enforcing patent claims, and  
our need to acquire licenses, or other rights for our product candidates.

Since inception, we have financed our operations primarily through private placements and public offerings of our capital stock, contract research funding and interest earned on investments. Our estimates of future capital use are uncertain and changing circumstances, including those related to implementation of, or further changes to, our development strategy, could cause us to consume capital significantly faster than currently expected, and our expected sources of funding may not be sufficient. If adequate funds are not available, we will be required to delay, reduce the scope of, or eliminate one or more of our product development programs or to obtain funds through arrangements with collaborators or other sources that may require us to relinquish rights to or sell certain of our technologies or products that we would not otherwise relinquish or sell. If we are able to obtain funds through the issuance of equity securities, our shareholders may suffer significant dilution and our stock price may drop.

***\*\*We have a history of losses, we expect to incur losses for at least the foreseeable future, and we may never attain or maintain profitability.***

We have never been profitable and have incurred significant losses in each year since our inception. As of June 30, 2011, we have an accumulated deficit of approximately \$359.2 million. We have not had any significant direct product sales and do not anticipate receiving revenues from the sale of any of our products for at least the next few years, if ever. While our shift in development strategy has resulted in reduced operating expenses and capital expenditures, we expect to continue to incur substantial losses for the foreseeable future as we:

continue drug product development efforts;  
conduct preclinical testing and clinical trials;  
pursue additional applications for our existing delivery technologies;  
outsource the commercial-scale production of our products; and  
establish a sales and marketing force to commercialize certain of our proprietary products if these products obtain regulatory approval.

To achieve and sustain profitability, we must, alone or with others, successfully develop, obtain regulatory approval for, manufacture, market and sell our products. We expect to incur substantial expenses in our efforts to develop and commercialize products and we may never generate sufficient product or contract research revenues to become profitable or to sustain profitability.

***\*\*Our dependence on future collaborators may delay or terminate certain of our programs, and any such delay or termination would harm our business prospects and stock price.***

Our commercialization strategy for certain of our product candidates depends on our ability to enter into agreements with collaborators to obtain assistance and funding for the development and potential commercialization of our product candidates. Supporting diligence activities conducted by potential collaborators and negotiating the financial and other terms of a collaboration agreement are long and complex processes with uncertain results. Even if we are

successful in entering into one or more collaboration agreements, collaborations may involve greater uncertainty for us, as we have less control over certain aspects of our collaborative programs than we do over our proprietary development and commercialization programs. We may determine that continuing a collaboration under the terms provided is not in our best interest, and we may terminate the collaboration. Our collaborators could delay or terminate their agreements, and our products subject to collaborative arrangements may never be successfully commercialized.

Further, our future collaborators may pursue alternative technologies or develop alternative products either on their own or in collaboration with others, including our competitors, and the priorities or focus of our collaborators may shift such that our programs receive less attention or resources than we would like, or they may be terminated altogether. Any such actions by our collaborators may adversely affect our business prospects and ability to earn

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revenues. In addition, we could have disputes with our future collaborators, such as the interpretation of terms in our agreements. Any such disagreements could lead to delays in the development or commercialization of any potential products or could result in time-consuming and expensive litigation or arbitration, which may not be resolved in our favor.

Even with respect to certain other programs that we intend to commercialize ourselves, we may enter into agreements with collaborators to share in the burden of conducting clinical trials, manufacturing and marketing our product candidates or products. In addition, our ability to apply our proprietary technologies to develop proprietary drugs will depend on our ability to establish and maintain licensing arrangements or other collaborative arrangements with the holders of proprietary rights to such drugs. We may not be able to establish such arrangements on favorable terms or at all, and our future collaborative arrangements may not be successful.

***\*\*We are dependent upon Zogenix and its partners to successfully market and sell the SUMAVEL DosePro needle-free delivery system in order to continue to realize value from this asset.***

We have no control over decisions made by Zogenix and/or its partners and collaborators on the marketing, sale or continued development of the SUMAVEL DosePro product and any subsequent products utilizing the DosePro technology. Any delay in, or failure to receive royalties could adversely affect our wholly-owned subsidiary's ability to repay the term loan entered into in June 2011. While the term loan is non-recourse to the assets of Aradigm Corporation, the term loan agreement contains a minimum royalty covenant. If the minimum royalty covenant is breached and the subsidiary does not cure the breach through a cash contribution to pay down the accrued principal and interest, then the lenders have the right to declare the agreement in default and obtain the right to all future royalties and payments due to Aradigm under the Zogenix asset purchase agreement.

***\*\*The results of later stage clinical trials of our product candidates may not be as favorable as earlier trials and that could result in additional costs and delay or prevent commercialization of our products.***

Although we believe the limited and preliminary data we have regarding our potential products are encouraging, the results of initial preclinical safety testing and clinical trials do not necessarily predict the results that we will get from subsequent or more extensive preclinical safety testing and clinical trials. Pre-clinical safety testing and clinical trials of our product candidates may not demonstrate that they are safe and effective to the extent necessary to obtain collaborative partnerships and/or regulatory approvals. Many companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after receiving promising results in earlier trials. If we cannot adequately demonstrate through pre-clinical studies and the clinical trial process that a therapeutic product we are developing is safe and effective, regulatory approval of that product would be delayed or prevented, which would impair our reputation, increase our costs and prevent us from earning revenues. For example, while both of our Phase 2b clinical trials (ORBIT-1 and ORBIT-2) with inhaled ciprofloxacin showed promising initial efficacy and safety results in patients with non-cystic fibrosis bronchiectasis and our Phase 2a clinical trials showed promising results in both patients with cystic fibrosis and non-cystic fibrosis bronchiectasis, there is no guarantee that longer term studies in larger patient populations will confirm these results or that we will be able to conduct studies that will provide satisfactory evidence of all efficacy and safety endpoints required by the regulatory authorities.

***\*\*The results of animal toxicology ( preclinical safety ) studies of our product candidates required for late stage clinical development and product approval may not be as favorable as the results from earlier experiments. Adverse toxicology findings may necessitate additional animal safety studies, or lead to more extensive requirements for safety information from human studies. These factors could result in additional costs and delays or prevent commercialization of our products.***

Although we typically select drugs for development that already have a substantial amount of safety data associated with them, and we also conduct a variety of preclinical studies, including animal inhalation toxicology studies, to support our product development, longer term safety studies in animals may be required before late stage clinical trials and product approval. For example, the regulatory authorities may request that we conduct two year carcinogenicity studies if they think that there are grounds to believe that our product could cause cancer. Longer term animal safety studies may produce toxicity findings that were not found in the shorter earlier studies, which

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could prevent commercialization of our products or could necessitate the conduct of further animal safety studies, leading to delays and additional costs. Toxicology findings from animal studies may also be the reason for more extensive safety monitoring and longer and larger human clinical trials than we originally anticipated, further adding to the cost and time prior to product commercialization.

***\*\*If our future clinical trials are delayed because of delays in obtaining FDA clearance to initiate the trials, delays in patient enrollment or other problems, we would incur additional costs and delay the potential receipt of revenues.***

Before we or any future collaborators can file for regulatory approval for the commercial sale of our potential products, the FDA will require extensive preclinical safety testing and clinical trials to demonstrate their safety and efficacy. Completing clinical trials in a timely manner depends on, among other factors, obtaining FDA clearance to initiate the trials and the timely enrollment of patients. Our ability to initiate future clinical trials is dependent upon obtaining clearance from the FDA following their review of extensive preclinical safety testing data and the results of previous human clinical trials. Our ability to recruit patients depends on a number of factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the study and the existence of competing clinical trials. Delays in our future clinical trials because of delays in obtaining FDA clearance, delays in planned patient enrollment or other problems may result in increased costs, program delays, or both, and the loss of potential revenues.

***We are subject to extensive regulation, including the requirement of approval before any of our product candidates can be marketed. We may not obtain regulatory approval for our product candidates on a timely basis, or at all.***

We and our products are subject to extensive and rigorous regulation by the federal government, principally the FDA, and by state and local government agencies. Both before and after regulatory approval, the development, testing, manufacture, quality control, labeling, storage, approval, advertising, promotion, sale, distribution and export of our potential products are subject to regulation. Pharmaceutical products that are marketed abroad are also subject to regulation by foreign governments. Our products cannot be marketed in the United States without FDA approval. The process for obtaining FDA approval for drug products is generally lengthy, expensive and uncertain. To date, we have not sought or received approval from the FDA or any corresponding foreign authority for any of our product candidates.

Even though we intend to apply for approval of most of our products in the United States under Section 505(b)(2) of the United States Food, Drug and Cosmetic Act, which applies to reformulations of approved drugs and which may require smaller and shorter safety and efficacy testing than that for entirely new drugs, the approval process will still be costly, time-consuming and uncertain. We, or our collaborators, may not be able to obtain necessary regulatory approvals on a timely basis, if at all, for any of our potential products. Even if granted, regulatory approvals may include significant limitations on the uses for which products may be marketed. Failure to comply with applicable regulatory requirements can, among other things, result in warning letters, imposition of civil penalties or other monetary payments, delay in approving or refusal to approve a product candidate, suspension or withdrawal of regulatory approval, product recall or seizure, operating restrictions, interruption of clinical trials or manufacturing, injunctions and criminal prosecution.

***Regulatory authorities may delay or not approve our product candidates even if the product candidates meet safety and efficacy endpoints in clinical trials or the approvals may be too limited for us to earn sufficient revenues.***

The FDA and other foreign regulatory agencies can delay approval of, or refuse to approve, our product candidates for a variety of reasons, including failure to meet safety and/or efficacy endpoints in our clinical trials. Our product candidates may not be approved even if they achieve their endpoints in clinical trials. Regulatory agencies, including



the FDA, may disagree with our trial design and our interpretations of data from preclinical studies and clinical trials. Even if a product candidate is approved, it may be approved for fewer or more limited indications than requested or the approval may be subject to the performance of significant post-marketing studies that can be long and costly. In addition, regulatory agencies may not approve the labeling claims that are necessary or desirable for the successful commercialization of our product candidates. Any limitation, condition or denial of approval would have an adverse affect on our business, reputation and results of operations.

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***Even if we are granted initial FDA approval for any of our product candidates, we may not be able to maintain such approval, which would reduce our revenues.***

Even if we are granted initial regulatory approval for a product candidate, the FDA and similar foreign regulatory agencies can limit or withdraw product approvals for a variety of reasons, including failure to comply with regulatory requirements, changes in regulatory requirements, problems with manufacturing facilities or processes or the occurrence of unforeseen problems, such as the discovery of previously undiscovered side effects. If we are able to obtain any product approvals, they may be limited or withdrawn or we may be unable to remain in compliance with regulatory requirements. Both before and after approval we, our future collaborators and our products are subject to a number of additional requirements. For example, certain changes to the approved product, such as adding new indications, certain manufacturing changes and additional labeling claims are subject to additional FDA review and approval. Advertising and other promotional material must comply with FDA requirements and established requirements applicable to drug samples. We, our future collaborators and our manufacturers will be subject to continuing review and periodic inspections by the FDA and other authorities, where applicable, and must comply with ongoing requirements, including the FDA's Good Manufacturing Practices, or GMP, requirements. Once the FDA approves a product, a manufacturer must provide certain updated safety and efficacy information, submit copies of promotional materials to the FDA and make certain other required reports. Product approvals may be withdrawn if regulatory requirements are not complied with or if problems concerning safety or efficacy of the product occur following approval. Any limitation or withdrawal of approval of any of our products could delay or prevent sales of our products, which would adversely affect our revenues. Further continuing regulatory requirements may involve expensive ongoing monitoring and testing requirements.

***\*\*Because our proprietary inhaled ciprofloxacin programs rely on the FDA's and European Medicines Agency's grant of orphan drug designation for potential market exclusivity, the product may not be able to obtain market exclusivity and could be barred from the market in the US for up to seven years or European Union for up to ten years.***

The FDA has granted orphan drug designation for our proprietary liposomal ciprofloxacin drug product candidate for the management of cystic fibrosis and bronchiectasis and to our ciprofloxacin for inhalation for the management of bronchiectasis. Orphan drug designation is intended to encourage research and development of new therapies for diseases that affect fewer than 200,000 patients in the United States. The designation provides the opportunity to obtain market exclusivity for seven years from the date of the FDA's approval of a new drug application, or NDA. However, the market exclusivity is granted only to the first chemical entity to be approved by the FDA for a given indication. Therefore, if another similar inhaled ciprofloxacin product were to be approved by the FDA for a cystic fibrosis or bronchiectasis indication before our product, then we may be blocked from launching our product in the United States for seven years, unless we are able to demonstrate to the FDA clinical superiority of our product on the basis of safety or efficacy. For example, Bayer HealthCare is developing an inhaled powder formulation of ciprofloxacin for the treatment of respiratory infections in cystic fibrosis and bronchiectasis. Bayer has obtained orphan drug status for their inhaled powder formulation of ciprofloxacin in the United States and European Union for the treatment of cystic fibrosis.

In August 2009, the European Medicines Agency granted orphan drug designation to our inhaled liposomal ciprofloxacin drug product candidate ARD-3100 for the treatment of lung infections associated with cystic fibrosis. Under European guidelines, Orphan Medicinal Product Designation provides 10 years of potential market exclusivity if the product candidate is the first product candidate for the indication approved for marketing in the European Union. We may seek to develop additional products that incorporate drugs that have received orphan drug designations for specific indications. In each case, if our product is not the first to be approved by the FDA or European Medicines Agency for a given indication, we may not be able to access the target market in the United States and/or the European Union, which would adversely affect our ability to earn revenues.



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***We have limited manufacturing capacity and will have to depend on contract manufacturers and collaborators; if they do not perform as expected, our revenues and customer relations will suffer.***

We have limited capacity to manufacture our requirements for the development and commercialization of our product candidates. We intend to use contract manufacturers to produce our products. We may not be able to enter into or maintain satisfactory contract manufacturing arrangements. For example, our agreement with Sigma-Tau Group to manufacture inhaled ciprofloxacin may be terminated for unforeseen reasons, or we may not be able to reach mutually satisfactory agreements with Sigma-Tau Group to manufacture these at a commercial scale. There may be a significant delay before we find an alternative contract manufacturer or we may not find an alternative contract manufacturer at all.

Further, we, our contract manufacturers and our future collaborators are required to comply with the FDA's GMP requirements that relate to product testing, quality assurance, manufacturing and maintaining records and documentation. We and our contract manufacturers or our future collaborators may not be able to comply with the applicable GMP and other FDA regulatory requirements for manufacturing, which could result in an enforcement or other action, prevent commercialization of our product candidates and impair our reputation and results of operations.

***\*\*In order to market certain of our proprietary products, we may establish our own sales, marketing and distribution capabilities. We have no experience in these areas, and if we have problems establishing these capabilities, the commercialization of our products would be impaired.***

We may establish our own sales, marketing and distribution capabilities to market certain products to concentrated, easily addressable prescriber markets. We have no experience in these areas, and developing these capabilities will require significant expenditures on personnel and infrastructure. While we may market products that are aimed at a small patient population, we may not be able to create an effective sales force around even a niche market. In addition, some of our product candidates will require a large sales force to call on, educate and support physicians and patients. While we intend to enter into collaborations with one or more pharmaceutical companies to sell, market and distribute such products, we may not be able to enter into any such arrangement on acceptable terms, if at all. Any collaboration we do enter into may not be effective in generating meaningful product royalties or other revenues for us.

***If any products that we or our future collaborators may develop do not attain adequate market acceptance by healthcare professionals and patients, our business prospects and results of operations will suffer.***

Even if we or our future collaborators successfully develop one or more products, such products may not be commercially acceptable to healthcare professionals and patients, who will have to choose our products over alternative products for the same disease indications, and many of these alternative products will be more established than ours. For our products to be commercially viable we will need to demonstrate to healthcare professionals and patients that our products afford benefits to the patients that are cost-effective as compared to the benefits of alternative therapies. Our ability to demonstrate this depends on a variety of factors, including:

- the demonstration of efficacy and safety in clinical trials;
- the existence, prevalence and severity of any side effects;
- the potential or perceived advantages or disadvantages compared to alternative treatments;
- the timing of market entry relative to competitive treatments;
- the relative cost, convenience, product dependability and ease of administration;

the strength of marketing and distribution support;

the sufficiency of coverage and reimbursement of our product candidates by governmental and other third-party payors; and

the product labeling or product insert required by the FDA or regulatory authorities in other countries.

Our product revenues will be adversely affected if, due to these or other factors, the products we or our future collaborators are able to commercialize do not gain significant market acceptance.

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***We depend upon our proprietary technologies, and we may not be able to protect our potential competitive proprietary advantage.***

Our business and competitive position is dependent upon our and our future collaborators' ability to protect our proprietary technologies related to various aspects of pulmonary drug delivery and drug formulation. While our intellectual property rights may not provide a significant commercial advantage for us, our patents and know-how are intended to provide protection for important aspects of our technology, including methods for aerosol generation, devices used to generate aerosols, breath control, compliance monitoring, certain pharmaceutical formulations, design of dosage forms and their manufacturing and testing methods. In addition, we are maintaining as non-patented trade secrets some of the key elements of our manufacturing technologies, for example, those associated with the production of inhaled ciprofloxacin.

Our ability to compete effectively will also depend to a significant extent on our and our future collaborators' ability to obtain and enforce patents and maintain trade secret protection over our proprietary technologies. The coverage claimed in a patent application typically is significantly reduced before a patent is issued, either in the United States or abroad. Consequently, any of our pending or future patent applications may not result in the issuance of patents and any patents issued may be subjected to further proceedings limiting their scope and may in any event not contain claims broad enough to provide meaningful protection. Any patents that are issued to us or our future collaborators may not provide significant proprietary protection or competitive advantage, and may be circumvented or invalidated. In addition, unpatented proprietary rights, including trade secrets and know-how, can be difficult to protect and may lose their value if they are independently developed by a third party or if their secrecy is lost. Further, because development and commercialization of pharmaceutical products can be subject to substantial delays, patents may expire and provide only a short period of protection, if any, following commercialization of products.

***We may infringe on the intellectual property rights of others, and any litigation could force us to stop developing or selling potential products and could be costly, divert management attention and harm our business.***

We must be able to develop products without infringing the proprietary rights of other parties. Because the markets in which we operate involve established competitors with significant patent portfolios, including patents relating to compositions of matter, methods of use and methods of drug delivery, it could be difficult for us to use our technologies or develop products without infringing the proprietary rights of others. We may not be able to design around the patented technologies or inventions of others and we may not be able to obtain licenses to use patented technologies on acceptable terms, or at all. If we cannot operate without infringing on the proprietary rights of others, we will not earn product revenues.

If we are required to defend ourselves in a lawsuit, we could incur substantial costs and the lawsuit could divert management's attention, regardless of the lawsuit's merit or outcome. These legal actions could seek damages and seek to enjoin testing, manufacturing and marketing of the accused product or process. In addition to potential liability for significant damages, we could be required to obtain a license to continue to manufacture or market the accused product or process and any license required under any such patent may not be made available to us on acceptable terms, if at all.

Periodically, we review publicly available information regarding the development efforts of others in order to determine whether these efforts may violate our proprietary rights. We may determine that litigation is necessary to enforce our proprietary rights against others. Such litigation could result in substantial expense, regardless of its outcome, and may not be resolved in our favor.

Furthermore, patents already issued to us or our pending patent applications may become subject to dispute, and any disputes could be resolved against us. For example, Eli Lilly and Company brought an action against us seeking to

have one or more employees of Eli Lilly named as co-inventors on one of our patents. This case was determined in our favor in 2004, but we may face other similar claims in the future and we may lose or settle cases at significant loss to us. In addition, because patent applications in the United States are currently maintained in secrecy for a period of time prior to issuance, patent applications in certain other countries generally are not published until more than 18 months after they are first filed, and publication of discoveries in scientific or patent literature often lags behind actual discoveries, we cannot be certain that we were the first creator of inventions covered by our pending patent applications or that we were the first to file patent applications on such inventions.

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***We are in a highly competitive market, and our competitors have developed or may develop alternative therapies for our target indications, which would limit the revenue potential of any product we may develop.***

We are in competition with pharmaceutical, biotechnology and drug delivery companies, hospitals, research organizations, individual scientists and nonprofit organizations engaged in the development of drugs and therapies for the disease indications we are targeting. Our competitors may succeed before we can, and many already have succeeded, in developing competing technologies for the same disease indications, obtaining FDA approval for products or gaining acceptance for the same markets that we are targeting. If we are not first to market, it may be more difficult for us and our future collaborators to enter markets as second or subsequent competitors and become commercially successful. We are aware of a number of companies that are developing or have developed therapies to address indications we are targeting, including major pharmaceutical companies such as Bayer, Genentech (now a part of Roche), Gilead Sciences, GlaxoSmith Kline, Johnson & Johnson, Novartis and Pfizer. Certain of these companies are addressing these target markets with pulmonary products that are similar to ours. These companies and many other potential competitors have greater research and development, manufacturing, marketing, sales, distribution, financial and managerial resources and experience than we have and many of these companies may have products and product candidates that are on the market or in a more advanced stage of development than our product candidates. Our ability to earn product revenues and our market share would be substantially harmed if any existing or potential competitors brought a product to market before we or our future collaborators were able to, or if a competitor introduced at any time a product superior to or more cost-effective than ours.

***If we do not continue to attract and retain key employees, our product development efforts will be delayed and impaired.***

We depend on a small number of key management and technical personnel. Our success also depends on our ability to attract and retain additional highly qualified management, clinical, regulatory and development personnel. There is a shortage of skilled personnel in our industry, we face competition in our recruiting activities, and we may not be able to attract or retain qualified personnel. Losing any of our key employees, particularly our President and Chief Executive Officer, Dr. Igor Gonda, could impair our product development efforts and otherwise harm our business. Any of our employees may terminate their employment with us at will.

***If we market our products in other countries, we will be subject to different laws and regulations and we may not be able to adapt to those laws and regulations, which could increase our costs while reducing our revenues.***

If we market any approved products in foreign countries, we will be subject to different laws and regulations, particularly with respect to intellectual property rights and regulatory approval. To maintain a proprietary market position in foreign countries, we may seek to protect some of our proprietary inventions through foreign counterpart patent applications. Statutory differences in patentable subject matter may limit the protection we can obtain on some of our inventions outside of the United States. The diversity of patent laws may make our expenses associated with the development and maintenance of intellectual property in foreign jurisdictions more expensive than we anticipate. We probably will not obtain the same patent protection in every market in which we may otherwise be able to potentially generate revenues. In addition, in order to market our products in foreign jurisdictions, we and our future collaborators must obtain required regulatory approvals from foreign regulatory agencies and comply with extensive regulations regarding safety and quality. We may not be able to obtain regulatory approvals in such jurisdictions and we may have to incur significant costs in obtaining or maintaining any foreign regulatory approvals. If approvals to market our products are delayed, if we fail to receive these approvals, or if we lose previously received approvals, our business would be impaired as we could not earn revenues from sales in those countries.

***We may be exposed to product liability claims, which would hurt our reputation, market position and operating results.***



We face an inherent risk of product liability as a result of the clinical testing of our product candidates in humans and will face an even greater risk upon commercialization of any products. These claims may be made directly by consumers or by pharmaceutical companies or others selling such products. We may be held liable if any product we

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develop causes injury or is found otherwise unsuitable during product testing, manufacturing or sale. Regardless of merit or eventual outcome, liability claims would likely result in negative publicity, decreased demand for any products that we may develop, injury to our reputation and suspension or withdrawal of clinical trials. Any such claim will be very costly to defend and also may result in substantial monetary awards to clinical trial participants or customers, loss of revenues and the inability to commercialize products that we develop. Although we currently have product liability insurance, we may not be able to maintain such insurance or obtain additional insurance on acceptable terms, in amounts sufficient to protect our business, or at all. A successful claim brought against us in excess of our insurance coverage would have a material adverse effect on our results of operations.

***If we cannot arrange for adequate third-party reimbursement for our products, our revenues will suffer.***

In both domestic and foreign markets, sales of our potential products will depend in substantial part on the availability of adequate reimbursement from third-party payors such as government health administration authorities, private health insurers and other organizations. Third-party payors often challenge the price and cost-effectiveness of medical products and services. Significant uncertainty exists as to the adequate reimbursement status of newly approved health care products. Any products we are able to successfully develop may not be reimbursable by third-party payors. In addition, our products may not be considered cost-effective and adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize a profit. Legislation and regulations affecting the pricing of pharmaceuticals may change before our products are approved for marketing and any such changes could further limit reimbursement. If any products we develop do not receive adequate reimbursement, our revenues will be severely limited.

***Our use of hazardous materials could subject us to liabilities, fines and sanctions.***

Our laboratory and clinical testing sometimes involves the use of hazardous and toxic materials. We are subject to federal, state and local laws and regulations governing how we use, manufacture, handle, store and dispose of these materials. Although we believe that our safety procedures for handling and disposing of such materials comply in all material respects with all federal, state and local regulations and standards, there is always the risk of accidental contamination or injury from these materials. In the event of an accident, we could be held liable for any damages that result and such liability could exceed our financial resources. Compliance with environmental and other laws may be expensive and current or future regulations may impair our development or commercialization efforts.

***If we are unable to effectively implement or maintain a system of internal control over financial reporting, we may not be able to accurately or timely report our financial results and our stock price could be adversely affected.***

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to evaluate the effectiveness of our internal control over financial reporting as of the end of each fiscal year, and to include a management report assessing the effectiveness of our internal control over financial reporting in our Annual Report on Form 10-K for that fiscal year. Our ability to comply with the annual internal control report requirements will depend on the effectiveness of our financial reporting and data systems and controls across our company. We expect these systems and controls to involve significant expenditures and to become increasingly complex as our business grows. To effectively manage this complexity, we will need to continue to improve our operational, financial and management controls and our reporting systems and procedures. Any failure to implement required new or improved controls, or difficulties encountered in the implementation or operation of these controls, could harm our operating results and cause us to fail to meet our financial reporting obligations, which could adversely affect our business and reduce our stock price.

## **Risks Related to Our Common Stock**

***Our stock price is likely to remain volatile.***

The market prices for securities of many companies in the drug delivery and pharmaceutical industries, including ours, have historically been highly volatile, and the market from time to time has experienced significant price and volume fluctuations unrelated to the operating performance of particular companies. The market prices

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for our common stock may continue to be highly volatile in the future. The market prices for our common stock may be influenced by many factors, including:

investor perception of us;

our available cash;

market conditions relating to our segment of the industry or the securities markets in general;

investor perception of the future royalty stream from Zogenix;

sales of our stock by certain large institutional shareholders;

research analyst recommendations and our ability to meet or exceed quarterly performance expectations of analysts or investors;

failure to establish or delays in establishing new collaborative relationships;

fluctuations in our operating results;

announcements of technological innovations or new commercial products by us or our competitors;

publicity regarding actual or potential developments relating to products under development by us or our competitors;

developments or disputes concerning patents or proprietary rights;

delays in the development or approval of our product candidates;

regulatory developments in both the United States and foreign countries;

concern of the public or the medical community as to the safety or efficacy of our products, or products deemed to have similar safety risk factors or other similar characteristics to our products;

future sales or expected sales of substantial amounts of common stock by shareholders;

our ability to raise capital; and

economic and other external factors.

In the past, class action securities litigation has often been instituted against companies promptly following volatility in the market price of their securities. Any such litigation instigated against us would, regardless of its merit, result in substantial costs and a diversion of management's attention and resources.

***Our common stock is quoted on the OTC Bulletin Board, which may provide less liquidity for our shareholders than the national exchanges.***

On November 10, 2006, our common stock was delisted from the Nasdaq Capital Market due to non-compliance with Nasdaq's continued listing standards. Our common stock is currently quoted on the OTC Bulletin Board. As compared

to being listed on a national exchange, being quoted on the OTC Bulletin Board may result in reduced liquidity for our shareholders, may cause investors not to trade in our stock and may result in a lower stock price. In addition, investors may find it more difficult to obtain accurate quotations of the share price of our common stock. Trading of our common stock through the OTC Bulletin Board is frequently thin and highly volatile, and there is no assurance that a sufficient market will develop in our common stock, in which case it could be difficult for our shareholders to sell their stock.

***Our common stock may be considered penny stock and may be difficult to sell.***

The SEC has adopted regulations which generally define penny stock to include an equity security that has a market price of less than \$5.00 per share, subject to specific exemptions. The market price of our common stock is currently less than \$5.00 per share and therefore may be designated as a penny stock according to SEC rules. This designation requires any broker or dealer selling these securities to disclose some information concerning the transaction, obtain a written agreement from the purchaser and determine that the purchaser is reasonably suitable

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to purchase the securities. These rules may restrict the ability of brokers or dealers to sell the common stock and may affect the ability of investors to sell their shares. These regulations may likely have the effect of limiting the trading activity of our common stock and reducing the liquidity of an investment in our common stock.

***We have implemented certain anti-takeover provisions, which may make an acquisition less likely or might result in costly litigation or proxy battles.***

Certain provisions of our articles of incorporation and the California Corporations Code could discourage a party from acquiring, or make it more difficult for a party to acquire, control of our company without approval of our Board of Directors. These provisions could also limit the price that certain investors might be willing to pay in the future for shares of our common stock. Certain provisions allow our Board of Directors to authorize the issuance, without shareholder approval, of preferred stock with rights superior to those of the common stock. We are also subject to the provisions of Section 1203 of the California Corporations Code, which requires us to provide a fairness opinion to our shareholders in connection with their consideration of any proposed interested party reorganization transaction.

We have adopted a shareholder rights plan, commonly known as a poison pill. We have also adopted an executive officer severance plan and entered into change of control agreements with our executive officers, both of which may provide for the payment of benefits to our officers and other key employees in connection with an acquisition. The provisions of our articles of incorporation, our poison pill, our severance plan and our change of control agreements, and provisions of the California Corporations Code may discourage, delay or prevent another party from acquiring us or reduce the price that a buyer is willing to pay for our common stock.

One of our shareholders may choose to pursue a lawsuit or engage in a proxy battle with management to limit our use of one or more of these anti-takeover protections. Any such lawsuit or proxy battle would, regardless of its merit or outcome, result in substantial costs and a diversion of management's attention and resources.

***We have never paid dividends on our capital stock, and we do not anticipate paying cash dividends for at least the foreseeable future.***

We have never declared or paid cash dividends on our capital stock. We do not anticipate paying any cash dividends on our common stock for at least the foreseeable future. We currently intend to retain all available funds and future earnings, if any, to fund the development and growth of our business. Therefore, our shareholders will not receive any funds absent a sale of their shares. We cannot assure shareholders of a positive return on their investment if they sell their shares, nor can we assure that shareholders will not lose the entire amount of their investment.

***A small number of shareholders own a large percentage of our common stock and can influence the outcome of matters submitted to our shareholders for approval.***

A small number of our shareholders own a large percentage of our common stock and can, therefore, influence the outcome of matters submitted to our shareholders for approval. Based on information known to us as of July 5, 2011, our three largest investors, collectively, control in excess of a majority of our outstanding common stock. As a result, these shareholders have the ability to influence the outcome of matters submitted to our shareholders for approval, including certain proposed amendments to our amended and restated articles of incorporation (for example, amendments to increase the number of our authorized shares) and any proposed merger, consolidation or sale of all or substantially all of our assets. These shareholders may support proposals and actions with which you may disagree. The concentration of ownership could delay or prevent a change in control of our company or otherwise discourage a potential acquirer from attempting to obtain control of our company, which in turn could reduce the price of our common stock.

**USE OF PROCEEDS**

We will not receive any of the proceeds from the sale of common stock by the selling shareholders under this prospectus. All proceeds from the sale of common stock under this prospectus will be paid directly to the selling shareholders. We have agreed to bear the expenses (other than any underwriting discounts or commissions or agent's commissions) in connection with the registration of the common stock being offered hereby by the selling shareholders.

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**MANAGEMENT'S DISCUSSION AND ANALYSIS OF  
FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The discussion below contains forward-looking statements that are based on the current beliefs of management, as well as current assumptions made by, and information currently available to, management. All statements contained in this prospectus, other than statements that are purely historical, are forward-looking statements. Words such as anticipate, expect, intend, plan, believe, may, will, could, continue, seek, estimate, probably, potentially, or the negative thereof and similar expressions also identify forward-looking statements. These forward-looking statements are subject to risks and uncertainties that could cause our future actual results, performance or achievements to differ materially from those expressed in, or implied by, any such forward-looking statements as a result of certain factors, including but not limited to, those risks and uncertainties discussed in this section as well as in the section entitled Risk Factors in this prospectus and other reports filed with the United States Securities and Exchange Commission (the SEC). Forward-looking statements include our belief that our cash, cash equivalents and short-term investments as of June 30, 2011 and the proceeds from the July 2011 private placement will be sufficient to enable us to fund our operations through at least the second quarter of 2012, our expectation that we will incur operating losses for the foreseeable future, our anticipations regarding revenue, collaboration agreements and our longer-term strategy and our expectations regarding clinical trials and orphan drug designations.*

*These forward-looking statements and our business are subject to significant risks including, but not limited to, our ability to obtain additional financing or partnering agreements in order to fund Phase 3 clinical trials of our inhaled ciprofloxacin product candidates, our ability to obtain clearance from the FDA for conducting our inhaled ciprofloxacin Phase 3 clinical trials, our ability to implement our product development strategy, the success of product development efforts, obtaining and enforcing patents important to our business, clearing the lengthy and expensive regulatory approval process and possible competition from other products. Even if product candidates appear promising at various stages of development, they may not reach the market or may not be commercially successful for a number of reasons. Such reasons include, but are not limited to, the possibilities that the potential products may be found to be ineffective during clinical trials, may fail to receive necessary regulatory approvals, may be difficult to manufacture on a large scale, are uneconomical to market, may be precluded from commercialization by proprietary rights of third parties or may not gain acceptance from health care professionals and patients.*

*Investors are cautioned not to place undue reliance on the forward-looking statements contained herein, which speak only as of the date of the filing of this prospectus. We undertake no obligation to update these forward-looking statements in light of events or circumstances occurring after the date of the filing of this prospectus or to reflect the occurrence of unanticipated events.*

**Overview**

We are an emerging specialty pharmaceutical company focused on the development and commercialization of drugs delivered by inhalation for the treatment of severe respiratory diseases by pulmonologists. Over the last decade, we invested a large amount of capital to develop drug delivery technologies, particularly the development of a significant amount of expertise in pulmonary drug delivery. We also invested considerable effort into the generation of a large volume of laboratory and clinical data demonstrating the performance of our AERx<sup>®</sup> pulmonary drug delivery platform and other proprietary technologies, including our ciprofloxacin formulations for inhalation. We have not been profitable since inception and expect to incur additional operating losses over at least the foreseeable future as we continue product development efforts, clinical trial activities, and possible sales, marketing and contract manufacturing efforts. To date, we have not had any significant product sales and do not anticipate receiving revenues



from the sale of any of our products in the near term. As of June 30, 2011, we had an accumulated deficit of \$359.2 million. Historically, we have funded our operations primarily through public offerings and private placements of our capital stock, license fees and milestone payments from collaborators, proceeds from the January 2005 restructuring transaction with Novo Nordisk, borrowings from Novo Nordisk, the milestone and royalty payments associated with the sale of Intraject-related assets to Zogenix, proceeds from the June 2011 royalty financing transaction and interest earned on cash equivalents and short-term investments.

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Over the last five years, our business has focused on opportunities in the development of drugs for the treatment of severe respiratory disease that could be developed by us and commercialized in the United States, or another significant territory such as the European Union (EU). It is our longer term strategy to commercialize our respiratory product candidates with our own focused marketing and sales force addressing pulmonary specialty doctors in the United States or in the EU, where we believe that a proprietary sales force will enhance the return to our shareholders. Where our products can benefit a broader population of patients in the United States or in other countries, we may enter into co-development, co-promotion or other marketing arrangements with collaborators, thereby reducing costs and increasing revenues through license fees, milestone payments and royalties. In selecting our proprietary development programs, we primarily seek drugs approved by the United States Food and Drug Administration (FDA) that can be reformulated for both existing and new indications in respiratory disease. Our intent is to use our pulmonary delivery methods and formulations to improve their safety, efficacy and convenience of administration to patients. We believe that this strategy will allow us to reduce cost, development time and risk of failure, when compared to the discovery and development of new chemical entities. Our lead development candidates are proprietary inhaled formulations, ARD-3100 (Lipoquin<sup>™</sup>) and ARD-3150 (Pulmaquin<sup>™</sup>), of the antibiotic ciprofloxacin that are delivered by inhalation for the management of infections associated with the severe respiratory diseases cystic fibrosis (CF) and non-cystic fibrosis bronchiectasis (BE). The formulations differ in the proportion of rapidly available and slow release ciprofloxacin. ARD-3150 uses the slow release liposomal formulation (ARD-3100) mixed with a small amount of ciprofloxacin dissolved in an aqueous medium. We received orphan drug designations for ARD-3100 for both of these indications in the U.S. and for cystic fibrosis in the European Union. We requested orphan drug designation from the FDA for ARD-3150 for the management of bronchiectasis and in June 2011 we were granted orphan drug designation for ciprofloxacin for inhalation for this indication. We may seek orphan drug designation for other eligible product candidates we develop. We have reported the results of one successful Phase 2b trial with ARD-3100 and one successful Phase 2b trial with ARD-3150 in non-cystic fibrosis bronchiectasis and two successful Phase 2a trials with ARD-3100 in cystic fibrosis and non-cystic fibrosis bronchiectasis, respectively.

In June 2008, we completed a multi-center 14-day treatment Phase 2a trial in Australia and New Zealand in 21 CF patients with once daily dosing of 6 mL of inhaled liposomal ciprofloxacin (ARD-3100). The primary efficacy endpoint in this Phase 2a study was the change from baseline in the sputum *Pseudomonas aeruginosa* colony forming units (CFU), an objective measure of the reduction in pulmonary bacterial load. Data analysis in 21 patients who completed the study demonstrated that the CFUs decreased by a mean 1.43 log against baseline over the 14-day treatment period ( $p < 0.0001$ ). Evaluation one week after study treatment was discontinued showed that the *Pseudomonas* bacterial density in the lung was still reduced from the baseline without additional antibiotic use. Pulmonary function testing as measured by the forced expiratory volume in one second (FEV1) showed a significant mean increase of 6.86% from baseline after 14 days of treatment ( $p = 0.04$ ). The study drug was well tolerated and there were no serious adverse events reported during the trial.

In December 2008, we completed an open-label, four week treatment study with once daily inhaled liposomal ciprofloxacin (ARD-3100) in patients with non-CF bronchiectasis. The study was conducted at eight leading centers in the United Kingdom and enrolled a total of 36 patients. The patients were randomized into two equal size groups, one receiving 3 mL of inhaled liposomal ciprofloxacin and the other receiving 6 mL of inhaled liposomal ciprofloxacin, once-a-day for the four-week treatment period. The primary efficacy endpoint was the change from baseline in the sputum *Pseudomonas aeruginosa* CFU, the standard objective measure of the reduction in pulmonary bacterial load. The 3 mL and 6 mL doses of inhaled liposomal ciprofloxacin in the evaluable patient population demonstrated significant mean decreases against baseline in the CFUs over the 28-day treatment period of 3.5 log ( $p < 0.001$ ) and 4.0 log ( $p < 0.001$ ) units, respectively.

In July 2009, we announced that clearance was received from the U.S. Food and Drug Administration for the inhaled liposomal ciprofloxacin (ARD-3100) Investigational New Drug (IND) application for the management of non-cystic fibrosis bronchiectasis.

In August 2009, the European Medicines Agency granted Orphan Drug Designation to our inhaled liposomal ciprofloxacin drug product candidate ARD-3100 for the treatment of lung infections associated with cystic fibrosis. Under European guidelines, Orphan Medicinal Product Designation provides 10 years of potential market exclusivity if the product candidate is the first product candidate for the indication approved for marketing in

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the European Union. Orphan drug designation also allows the candidate's sponsor to seek assistance from the European Medicines Agency in optimizing the candidate's clinical development through participation in designing the clinical protocol and preparing the marketing application. Additionally, a drug candidate designated by the Commission as an Orphan Medicinal Product may qualify for a reduction in regulatory fees as well as a European Union-funded research grant. We had previously been granted orphan drug designations by the U.S. Food and Drug Administration for inhaled liposomal ciprofloxacin ARD-3100 for the management of CF and for non-cystic fibrosis bronchiectasis.

In November 2009, the first patient was dosed in the ORBIT-2 (Once-daily Respiratory Bronchiectasis Inhalation Treatment) trial, a 168 day, multicenter, international Phase 2b clinical trial of inhaled ciprofloxacin with the ARD-3150 (Pulmaquin) formulation in 42 adult patients with non-cystic fibrosis bronchiectasis. The randomized, double-blind, placebo-controlled trial was conducted in Australia and New Zealand. Following a 14 day screening period, the patients were treated once-a-day for 28 days with either the active drug, or placebo, followed by a 28 day off-treatment period. This on-off sequence was repeated three times. The primary endpoint was defined as the mean change in *Pseudomonas aeruginosa* density in sputum (colony forming units - CFU - per gram) from baseline to day 28 of the active treatment group versus placebo. Safety and tolerability assessments of the treatment versus placebo group were performed and secondary efficacy endpoints being assessed included long term microbiological responses, time to an exacerbation, severity of exacerbations, length of time to resolve exacerbations and changes in lung function and in quality of life measurements. ORBIT-2 explored whether the novel formulation ARD-3150, which has a different drug release profile than ARD-3100, may have additional therapeutic benefits.

In October 2010, we announced positive top line data from the ORBIT-2 study. Statistical significance was achieved in the primary endpoint - the mean change in *Pseudomonas aeruginosa* density in sputum from baseline to day 28. In the full analysis population (full analysis set includes all patients who were randomized, received at least one dose and provided samples for at least two time points), there was a significant mean reduction of 4.2 log<sub>10</sub> units in the ARD-3150 group, reflecting an almost sixteen-thousand fold decrease in bacterial load, versus a very small mean decrease of 0.1 log<sub>10</sub> units in the placebo group (p=0.004). Secondary endpoint analysis showed that 17 subjects in the placebo group required supplemental antibiotics for respiratory-related infections versus 8 subjects in the ARD-3150 group (p=0.05). As announced in January 2011, the Kaplan-Meier analysis showed that the median time to first pulmonary exacerbation in the per protocol evaluation increased from 58 days in the placebo group to 134 days in the active treatment group and was statistically significant (p<0.05, log rank test). ARD-3150 was well tolerated and there were no significant decreases in lung function, as measured by FEV1 (forced expiratory volume in one second), at 28 days in either group. Overall, the incidence and severity of adverse events were similar in both the placebo and treatment groups; however, ARD-3150 had a superior pulmonary safety profile reflected in the number and severity of pulmonary adverse events. As announced in May 2011, further statistical analysis concluded that the reduction from baseline in *Pseudomonas aeruginosa* CFUs with ARD-3150 was rapid and persistent throughout the treatment cycles as exemplified by the statistically significant reductions of the mean log CFU values in the ARD-3150 group versus the placebo at day 14 and day 28 during the first treatment cycle, as well as at the end of the second and third cycles of treatment (days 84 and 140, respectively).

In February 2010, the first patient was dosed in the U.S. as part of the ORBIT-1 trial. This Phase 2b trial, an international, double-blind, placebo-controlled study being conducted under a U.S. FDA IND, randomized 95 patients and completed enrollment in March 2011. The ORBIT-1 study design called for four weeks of once-daily inhaled doses of the active drug or once-daily inhaled placebo. Two doses of the active drug were included in the study - 100 or 150 mg ciprofloxacin delivered by inhalation as 2 or 3 mL of liposomal dispersion, respectively. The primary efficacy endpoint was a standard measure of antibacterial activity - the change from baseline in sputum *Pseudomonas aeruginosa* colony forming units (CFUs). Secondary endpoints included quality of life measurements and improvement of outcomes with respect to exacerbations. Lung function changes were monitored for safety. In June 2011, we announced positive top line data from the ORBIT-1 study. The primary endpoint - the mean change in

*Pseudomonas aeruginosa* colony forming units per gram of sputum (CFUs) from baseline to day 28 was met in the full analysis population: The full analysis set included all patients who were randomized, received at least one dose and provided samples for at least two time points. There was a significant mean reduction ( $p < 0.001$ ) of 2.942 log<sub>10</sub> CFUs in the 3mL ARD-3100 group and a significant mean reduction

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( $p < 0.001$ ) of 3.842 log<sub>10</sub> CFUs in the 2mL ARD-3100 group compared to placebos. Pooled placebo groups had a mean reduction of log<sub>10</sub> CFUs of 0.437. There was no statistically significant difference between the 2 mL and 3 mL ARD-3100 doses. ARD-3100 was well-tolerated and no bronchodilator treatment was mandated before inhaled study treatments. There were no statistically significant differences between the active and placebo groups in the number of patients experiencing at least one respiratory treatment-emergent adverse event. The incidence of serious adverse events (SAEs) was low; there were a total of 6 SAEs and none of them were treatment related.

The results from each of these trials will produce an extensive data base of information from which we hope to select the optimum product and the most appropriate endpoints to test in Phase 3. In order to expedite anticipated time to market and increase market acceptance, we have elected to deliver our formulations via an FDA-approved, widely-accepted nebulizer system for each of these Phase 2b trials.

In August 2006, we sold all of our assets related to the Intraject needle-free injector technology platform and products, including 12 United States patents along with foreign counterparts, to Zogenix, Inc., a private company. Zogenix is responsible for further development and commercialization efforts of Intraject (now rebranded under the name DosePro®). In conjunction with the sale, we received a \$4 million initial payment from Zogenix, with an additional milestone payment of \$4 million and royalty payments payable upon any commercialization of products in the U.S. and other countries, including the European Union, developed and sold using the DosePro technology. In July 2009, Zogenix was granted approval by the FDA of the SUMAVEL DosePro (sumatriptan injection) needle-free delivery system for the treatment of acute migraine and cluster headache. In August 2009, Zogenix and Astellas Pharma US, Inc. entered into an exclusive co-promotion agreement in the U.S. for the SUMAVEL DosePro needle-free delivery system. On January 13, 2010, Zogenix announced the U.S. commercial launch of SUMAVEL DosePro. In February 2010, we received from Zogenix the \$4 million milestone payable upon the initial commercialization of SUMAVEL DosePro. In December 2010, Zogenix was granted approval of the Marketing Authorization Application ( MAA ) for SUMAVEL DosePro (sumatriptan injection) needle-free delivery system by the Danish Medicines Agency of Denmark. Denmark is the first country in Europe to grant marketing authorization for SUMAVEL DosePro. Five weeks later, the Federal Institute for Drugs and Medical Devices of Germany (BrArM) and the Medicines and Healthcare products Regulatory Agency of the United Kingdom (MHRA) granted approval of the MAA for SUMAVEL DosePro (sumatriptan injection) needle-free delivery system for the acute treatment of migraine attacks, with or without aura, and the acute treatment of cluster headache. Germany and the United Kingdom are two of the largest pharmaceutical markets in Europe. We are entitled to 3% royalty on net sales of SUMAVEL DosePro in all territories.

On June 21, 2011, we entered into an \$8.5 million royalty financing agreement (the Transaction ) with a syndicate of lenders arranged by PBS Capital Management LLC ( PBS Capital ). The agreement created a debt obligation (the Term Loan ) that will be repaid through and secured by royalties from net sales of the SUMAVEL DosePro™ (sumatriptan injection) needle-free delivery system payable to Aradigm under its Asset Purchase Agreement ( APA ) with Zogenix.

Under the terms of the royalty financing agreement, we received a loan of \$8.5 million, less fees, transaction and legal expenses (estimated to be approximately \$473,000) and an additional \$250,000 set aside for an Interest Reserve Account. The lenders will be entitled to receive 100% of all royalties payable to us under the APA until the principal and accrued interest of the Term Loan are fully repaid, after which time the benefit of any further royalties made under the APA will accrue to Aradigm. The Term Loan will accrue interest at the rate equal to the greater of a) LIBOR or b) one-and-a-half percent (1.50%), plus a margin of fourteen-and-a-half percent (14.5%). To the extent royalty payments are insufficient to pay accrued and unpaid interest under the financing, the shortfall will be funded from the Interest Reserve Account or, if the account is insufficient to pay all of the interest due, the shortfall will be capitalized and added to the principal balance of the Term Loan. The lenders were granted a security interest in the assets of an Aradigm subsidiary that holds Aradigm's rights to receive royalty payments under the APA. The lenders have no recourse to other assets of Aradigm for repayment of the loan. Amortization of the Term Loan will occur to

the extent that royalties payments received for any quarter exceed accrued interest due for that quarter.

We have the right to prepay the Term Loan after June 21, 2012, subject to the payment of the principal balance plus a prepayment fee of eight percent (8%) of the outstanding balance if prepaid in months 13-24 following the Transaction closing date of June 21, 2011; four percent (4%) if prepaid in months 25-36; and two percent (2%) if

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prepaid in months 37-48. There will be no prepayment fee for prepaying the Term Loan after the forty-eight (48) month anniversary of the closing date. In addition, we have the right to make partial prepayments in an amount no less than the greater of (i) ten percent (10%) of the principal balance of the Term Loan outstanding as of the applicable prepayment date or (ii) \$1,000,000. Under no circumstances will the receipt of royalty payments from Zogenix in excess of the accrued interest then due be considered prepayments under the Term Loan.

In connection with the Transaction, Aradigm issued to the lenders warrants to purchase a total of 2,840,909 shares of Aradigm common stock at a strike price of \$0.22 per share, representing a 20% premium above the average closing price of Aradigm common stock for the ten trading days immediately preceding the closing of the Transaction. The warrants expire on December 31, 2016.

On July 7, 2011, we closed a private placement, which we refer to in this prospectus as the July 2011 private placement, in which we sold 25,000,000 shares of our common stock to accredited investors (which included a few then-existing significant shareholders) under the terms of a securities purchase agreement that we entered into with the selling shareholders on July 5, 2011. At the closing of the July 2011 private placement, we received approximately \$4.75 million in aggregate gross proceeds from the sale of the common stock. After deducting fees and expenses, the aggregate net proceeds from the sale of the common stock were approximately \$4.4 million.

## **Critical Accounting Policies and Estimates**

We consider certain accounting policies related to revenue recognition, impairment of long-lived assets, exit/disposal activities, research and development, income taxes and stock-based compensation to be critical accounting policies that require the use of significant judgments and estimates relating to matters that are inherently uncertain and may result in materially different results under different assumptions and conditions. The preparation of financial statements in conformity with United States generally accepted accounting principles requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes to the financial statements. These estimates include useful lives for property and equipment and related depreciation calculations, estimated amortization periods for payments received from product development and license agreements as they relate to the revenue recognition, and assumptions for valuing options, warrants and other stock-based compensation. Our actual results could differ from these estimates.

### ***Revenue Recognition***

Contract revenues consist of revenues from grants, collaboration agreements and feasibility studies. We recognize revenue under the provisions of the Securities and Exchange Commission issued Staff Accounting Bulletin 104, Topic 13, *Revenue Recognition Revised and Updated* ( SAB 104 ) and Accounting Standards Codification ( ASC ) 605-25, *Revenue Arrangements-Multiple Element Arrangements* ( ASC 605-25 ). Revenue for arrangements not having multiple deliverables, as outlined in ASC 605-25, is recognized once costs are incurred and collectability is reasonably assured.

Collaborative license and development agreements often require us to provide multiple deliverables, such as a license, research and development, product steering committee services and other performance obligations. These agreements are accounted for in accordance with ASC 605-25. Under this standard, delivered items are evaluated to determine whether such items have value to our collaborators on a stand-alone basis and whether objective reliable evidence of fair value of the undelivered items exist.

Deliverables that meet these criteria are considered a separate unit of accounting. Deliverables that do not meet these criteria are combined and accounted for as a single unit of accounting. The appropriate revenue recognition criteria are identified and applied to each separate unit of accounting.



Royalty revenue will be earned under the terms of the asset sale agreement with Zogenix. We will recognize revenue when the amounts under this agreement can be determined and when collectability is probable. We have no performance obligations under this agreement. We anticipate recognizing revenue from quarterly royalty payments

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one quarter in arrears since we believe that we will not be able to determine quarterly royalty earnings until we receive our royalty statements and payments from Zogenix.

### ***Impairment of Long-Lived Assets***

In accordance with ASC 360-10, *Property Plant and Equipment* Overall, we review for impairment whenever events or changes in circumstances indicate that the carrying amount of property and equipment may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, we write down the assets to their estimated fair values and recognize the loss in the statements of operations.

### ***Accounting for Costs Associated with Exit or Disposal Activities***

In accordance with ASC 420, *Exit or Disposal Cost Obligations* ( ASC 420 ), we recognize a liability for the cost associated with an exit or disposal activity that is measured initially at its fair value in the period in which the liability is incurred, except for a liability for one-time termination benefits that is incurred over time. According to this guidance, costs to terminate an operating lease or other contracts are (a) costs to terminate the contract before the end of its term or (b) costs that will continue to be incurred under the contract for its remaining term without economic benefit to the entity. In periods subsequent to initial measurement, changes to the liability are measured using the risk-free interest rate that was used to measure the liability initially. We recorded losses under this standard for the Mendel sublease in 2007 and for the sublease of additional space in 2009 since the sublease rate was less than the rental rate that we are paying.

### ***Research and Development***

Research and development expenses consist of costs incurred for company-sponsored, collaborative and contracted research and development activities. These costs include direct and research-related overhead expenses. Research and development expenses that are reimbursed under collaborative and government grants approximate the revenue recognized under such agreements. We expense research and development costs as such costs are incurred.

### ***Income Taxes***

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes. As part of the process of preparing our financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves us estimating our current tax exposure under the most recent tax laws and assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. In addition, we evaluate our tax positions to ensure that a minimum recognition threshold is met before we recognize the tax position in the financial statements. The aforementioned differences result in deferred tax assets and liabilities, which are included in our balance sheets.

We assess the likelihood that we will be able to recover our deferred tax assets. We consider all available evidence, both positive and negative, including our historical levels of income and losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. If we do not consider it more likely than not that we will recover our deferred tax assets, we will record a valuation allowance against the deferred tax assets that we estimate will not ultimately be recoverable. At June 30, 2011 and December 31, 2010, we believed that the amount of our deferred income taxes would not be

ultimately recovered. Accordingly, we recorded a full valuation allowance for deferred tax assets. However, should there be a change in our ability to recover our deferred tax assets, we would recognize a benefit to our tax provision in the period in which we determine that it is more likely than not that we will recover our deferred tax assets.

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We regularly analyze the status of our deferred tax assets and our ability to utilize them to offset future taxable income, such as income received from collaboration or partnering transactions, and such availability cannot be assured.

### ***Stock-Based Compensation***

We account for stock-based payment arrangements in accordance with ASC 718, *Compensation – Stock Compensation* and ASC 505-50 *Equity-Equity Based Payments to Non-Employees* which requires the recognition of compensation expense, using a fair-value based method, for all costs related to stock-based payments including stock options, restricted stock awards and stock issued under the employee stock purchase plan. These ASC topics require companies to estimate the fair value of stock-based payment awards on the date of the grant using an option pricing model.

Stock-based compensation expense is recorded to research and development and general and administrative expenses based on the function of the related employee. This charge had no impact on our cash flows for the periods presented.

We use the Black-Scholes option-pricing model to estimate the fair value of stock-based awards as of the grant date. The Black-Scholes model is complex and dependent upon key data input estimates. The primary data inputs with the greatest degree of judgment are the estimated lives of the stock options and the estimated volatility of our stock price. The Black-Scholes model is highly sensitive to changes in these two inputs. The expected term of the options represents the period of time that options granted are expected to be outstanding. We use the simplified method to estimate the expected term as an input into the Black-Scholes option pricing model. We determine expected volatility using the historical method, which is based on the historical daily trading data of our common stock over the expected term of the option. For more information about our accounting for stock-based compensation, see Note 9 to the audited financial statements included in our Annual Report on Form 10-K.

### ***Recent Accounting Pronouncements***

See Note 2 to the accompanying unaudited condensed consolidated financial statements included in this prospectus for information on recent accounting pronouncements.

## **Results of Operations**

### ***Three and six months ended June 30, 2011 and 2010***

We reduced our net loss by approximately \$1.2 million for the three months ended June 30, 2011 as compared with the three months ended June 30, 2010. This favorable result occurred because of lower research and development costs and the receipt of quarterly royalty payments from Zogenix in the three months ended June 30, 2011. Our net loss increased by approximately \$1.0 million for the six months ended June 30, 2011 as compared with the six months ended June 30, 2010. This unfavorable result was due to the one-time receipt of the \$4.0 million milestone from Zogenix recorded as royalty revenue in the first quarter of 2010 partially offset by significantly lower research and development expenses during the six month period ended June 30, 2011 as compared with the comparable period in the prior year. Research and development expenses were lower despite our continued investment in our inhaled ciprofloxacin program, including the expenses related to our two Phase 2b clinical trials.

We recorded revenue in the three months ended June 30, 2011 for the Zogenix quarterly royalty receipts of approximately \$0.2 million as compared to zero revenue for the three months ended June 30, 2010. Total revenue was approximately \$0.4 million for the six months ended June 30, 2011 as compared with \$4.0 million in revenue for the six months ended June 30, 2010. The \$4.0 million in royalty revenue related to the milestone payment that was due

upon the initial commercialization of Zogenix's SUMAVEL DosePro product.

Operating expenses were approximately \$3.0 million for the three months ended June 30, 2011 which represented an approximately \$1.1 million decrease from the three months ended June 30, 2010. Research and development expenses decreased approximately \$1.2 million and general and administrative expenses increased by approximately \$0.1 million as compared with the three months ended June 30, 2010. Operating expenses were

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approximately \$5.7 million for the six months ended June 30, 2011, which represented an approximately \$2.6 million decrease as compared with the six months ended June 30, 2010. Research and development expenses decreased approximately \$2.5 million and general and administrative expenses decreased approximately \$0.1 million as compared with the six months ended June 30, 2010.

The decrease in research and development expenses was due to slightly lower headcount, lower depreciation expense and lower clinical trials costs. For the quarter ended June 30, 2011, lower clinical trials costs were mainly due to lower contract manufacturing costs related to the production of inhaled ciprofloxacin for the Phase 2b trials and lower clinical costs due to the ramp up of the Phase 2b trials that occurred in the prior year period.

## **Liquidity and Capital Resources**

As of June 30, 2011, we had cash, cash equivalents and short-term investments of approximately \$9.4 million and total working capital of approximately \$7.2 million. We believe that cash, cash equivalents and short-term investments at June 30, 2011, as well as the proceeds from the July 2011 private placement, will be sufficient to enable us to fund our operations through at least the second quarter of 2012.

Since inception, we have funded our operations primarily through public offerings and private placements of our capital stock, license fees and milestone payments from collaborators, proceeds from the January 2005 restructuring transaction with Novo Nordisk, borrowings from Novo Nordisk, the milestone and royalty payments associated with the sale of Intraject-related assets to Zogenix, proceeds from the June 2011 royalty financing transaction and interest earned on investments. We have incurred significant losses and negative cash flows from operations since our inception. At June 30, 2011, we had an accumulated deficit of approximately \$359.2 million and shareholders' equity of approximately \$0.2 million.

We are currently focusing primarily on establishing funded partnering agreements and sale or out-licensing of non-strategic assets as the means to generate the capital resources needed to fund the further development and commercialization of inhaled ciprofloxacin for the bronchiectasis and cystic fibrosis indications. If we are unable to find financing on acceptable terms, we may be required to defer our product development activities.

### ***Six months ended June 30, 2011***

Total cash and cash equivalents increased by approximately \$3.2 million for the six months ended June 30, 2011, compared to December 31, 2010. The increase in cash and cash equivalents was primarily due to the net proceeds of approximately \$8.1 million from the royalty financing transaction in June 2011. This increase was offset by cash used in operations of approximately \$4.3 million, as well as cash used for the net purchase of securities of approximately \$0.7 million.

### ***Six months ended June 30, 2010***

Total cash and cash equivalents increased by approximately \$5.7 million for the six months ended June 30, 2010, compared to December 31, 2009. The increase in cash and cash equivalents was primarily due to the net proceeds of approximately \$3.7 million from the sale of common stock in the June 2010 Private Placement and the net proceeds from the sale of short-term investments of approximately \$5.2 million. This increase was partially offset by cash used in operations of approximately \$3.3 million. Cash used in operations was favorably impacted by the receipt of the \$4.0 million milestone payment from Zogenix.

## ***Off-Balance Sheet Financings and Liabilities***

Other than contractual obligations incurred in the normal course of business, we do not have any off-balance sheet financing arrangements or liabilities, guarantee contracts, retained or contingent interests in transferred assets or any obligation arising out of a material variable interest in an unconsolidated entity. We have one active, wholly-owned subsidiary incorporated in Delaware, Aradigm Royalty Financing LLC, and one inactive, wholly-owned subsidiary domiciled in the United Kingdom.

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**DESCRIPTION OF THE BUSINESS**

**Overview**

We are an emerging specialty pharmaceutical company focused on the development and commercialization of drugs delivered by inhalation for the treatment of severe respiratory diseases by pulmonologists. Over the last decade, we invested a large amount of capital to develop drug delivery technologies, particularly the development of a significant amount of expertise in pulmonary drug delivery. We also invested considerable effort into the generation of a large volume of laboratory and clinical data demonstrating the performance of our AERx<sup>®</sup> pulmonary drug delivery platform and other proprietary technologies, including our liposomal ciprofloxacin formulations for inhalation. We have not been profitable since inception and expect to incur additional operating losses over at least the foreseeable future as we continue product development efforts, clinical trial activities, and possible sales, marketing and contract manufacturing efforts. To date, we have not had any significant product sales and do not anticipate receiving revenues from the sale of any of our products in the near term. As of June 30, 2011, we had an accumulated deficit of \$359.2 million. Historically, we have funded our operations primarily through public offerings and private placements of our capital stock, license fees and milestone payments from collaborators, proceeds from the January 2005 restructuring transaction with Novo Nordisk, borrowings from Novo Nordisk, the milestone and royalty payments associated with the sale of Intraject-related assets to Zogenix, proceeds from the June 2011 royalty financing transaction and interest earned on cash equivalents and short-term investments.

Over the last five years, our business has focused on opportunities in the development of drugs for the treatment of severe respiratory disease that could be developed by us and commercialized in the United States, or another significant territory such as the European Union (EU). It is our longer term strategy to commercialize our respiratory product candidates with our own focused marketing and sales force addressing pulmonary specialty doctors in the United States or in the EU, where we believe that a proprietary sales force will enhance the return to our shareholders. Where our products can benefit a broader population of patients in the United States or in other countries, we may enter into co-development, co-promotion or other marketing arrangements with collaborators, thereby reducing costs and increasing revenues through license fees, milestone payments and royalties. In selecting our proprietary development programs, we primarily seek drugs approved by the United States Food and Drug Administration (FDA) that can be reformulated for both existing and new indications in respiratory disease. Our intent is to use our pulmonary delivery methods and formulations to improve their safety, efficacy and convenience of administration to patients. We believe that this strategy will allow us to reduce cost, development time and risk of failure, when compared to the discovery and development of new chemical entities. Our lead development candidates are proprietary inhaled formulations, ARD-3100 (Lipoquin<sup>™</sup>) and ARD-3150 (Pulmaquin<sup>™</sup>), of the antibiotic ciprofloxacin that are delivered by inhalation for the management of infections associated with the severe respiratory diseases cystic fibrosis (CF) and non-cystic fibrosis bronchiectasis (BE). The formulations differ in the proportion of rapidly available and slow release ciprofloxacin. ARD-3150 uses the slow release liposomal formulation (ARD-3100) mixed with a small amount of ciprofloxacin dissolved in an aqueous medium. We received orphan drug designations for ARD-3100 for both of these indications in the U.S. and for cystic fibrosis in the European Union. We requested orphan drug designation from the FDA for ARD-3150 for the management of bronchiectasis and in June 2011 we were granted orphan drug designation for ciprofloxacin for inhalation for this indication. We may seek orphan drug designation for other eligible product candidates we develop. We have reported the results of one successful Phase 2b trial with ARD-3100 and one successful Phase 2b trial with ARD-3150 in non-cystic fibrosis bronchiectasis and two successful Phase 2a trials with ARD-3100 in cystic fibrosis and non-cystic fibrosis bronchiectasis, respectively.

Pulmonary delivery by inhalation is already a widely used and well accepted method of administration of a variety of drugs for the treatment of respiratory diseases. Compared to other routes of administration, inhalation provides local



delivery of the drug to the respiratory tract which offers a number of potential advantages, including rapid onset of action, less drug required to achieve the desired therapeutic effect, and reduced side effects because the rest of the body has lower exposure to the drug. We believe that there still are significant unmet medical needs in the respiratory disease market, both to replace existing therapies that over prolonged use in patients demonstrate reduced efficacy or increased side effects, as well as to provide novel treatments to patient populations and for disease conditions that are inadequately treated.

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In addition to its use in the treatment of respiratory diseases, there is also an increasing awareness of the value of the inhalation route of delivery to administer drugs via the lung for the systemic treatment of disease elsewhere in the body. For many drugs, the large and highly absorptive area of the lung enables bioavailability and fast absorption as a result of pulmonary delivery than could otherwise only be obtained by injection. We believe that the features of our AERx delivery system make it more attractive for many systemic drug applications than alternative methods. We believe particular opportunities exist for the use of our pulmonary delivery technology for the delivery of biologics, including proteins, antibodies and peptides that today must be delivered by injection, as well as small molecule drugs, where rapid absorption is desirable. We intend to pursue selected opportunities for systemic delivery via inhalation by seeking collaborations and government grants that will fund development and commercialization.

We believe that our proprietary formulation and delivery technologies and our experience in the development and management of pulmonary clinical programs uniquely position us to benefit from opportunities in the respiratory disease market as well as other pharmaceutical markets that would benefit from the efficient, non-invasive inhalation delivery of drugs.

## **Our Strategy**

We have transitioned our business model to a specialty pharmaceutical company focused on the development and commercialization of a portfolio of drugs delivered by inhalation for the treatment and prevention of severe respiratory diseases. We have chosen to focus on respiratory diseases based on the expertise of our management team and the history of our company. We have significant experience in the treatment of respiratory diseases and specifically in the development of inhalation products that are uniquely suited for their treatment. We have a portfolio of proprietary technologies that may potentially address significant unmet medical needs for unique or significantly improved products in the global respiratory market. There are five key elements of our strategy:

*Develop a proprietary portfolio of products for the treatment of respiratory diseases.* We believe our expertise in the development of pulmonary pharmaceutical products should enable us to advance and commercialize respiratory products for a variety of indications. We select for development those product candidates that can benefit from our experience in pulmonary delivery and that we believe are likely to provide a superior therapeutic profile or other valuable benefits to patients when compared to existing products.

*Accelerate the regulatory approval process.* We believe that our management team's expertise in pharmaceutical inhalation products, new indications and reformulations of existing drugs will enable us to pursue the most appropriate regulatory pathway for our product candidates. Because our current product candidates incorporate FDA-approved drugs, we believe that the most expedient review and approval pathway for these product candidates in the United States will be under Section 505(b)(2) of the Food, Drug and Cosmetic Act, or the FDCA. Section 505(b)(2) permits the FDA to rely on scientific literature or on the FDA's prior findings of safety and/or effectiveness for approved drug products. By choosing to develop new applications or reformulations of FDA-approved drugs, we believe that we can substantially reduce or potentially eliminate the significant time, expenditure and risks associated with preclinical testing of new chemical entities and biologics, as well as utilize knowledge of these approved drugs to reduce the risk, time and cost of the clinical trials needed to obtain drug approval. In addressing niche market opportunities, we have already been granted or intend to pursue orphan drug designation for our products when appropriate. Orphan drug designation may be granted to drugs and biologics that treat rare life-threatening diseases that affect fewer than 200,000 persons in the United States. Such designation provides a company with the possibility of market exclusivity for seven years as well as regulatory assistance, reduced filing fees and possible tax credits. Similar legislation exists in the EU with a market exclusivity of 10 years.

*Develop our own sales and marketing capacity for products in niche markets.* It is our longer term strategy to develop our own targeted sales and marketing force for those of our products prescribed primarily by the approximately 11,000 pulmonologists, or their subspecialty associates, in the United States. We may also decide alternatively to explore the use of our sales force to serve pulmonary specialty physicians in another significant pharmaceutical market, such as the EU. We expect to begin establishing a sales force as we approach commercialization of the first of such products. We believe that by developing a small sales group dedicated to interacting with disease-specific physicians in the respiratory field, we can create greater value from our

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products for our shareholders. For markets where maximizing sales of the product would depend on marketing to primary healthcare providers that are only addressable with a large sales force, we plan to enter into co-marketing arrangements. We also intend to establish collaborative relationships to commercialize our products in cases where we cannot meet these goals with a small sales force or when we need collaborators with relevant expertise and capabilities, such as the ability to address international markets. Through such collaborations, we may also utilize our collaborators' resources and expertise to conduct large late-stage clinical development.

*Exploit the broad applicability of our delivery technology through product development collaborations.* We continue to believe that companies can benefit by collaborating with us when our proprietary delivery technologies create new pharmaceutical and biologics products. We intend to continue to exploit the broad applicability of our delivery technologies for systemic applications of our technologies in collaborations with companies and organizations that will fund development and commercialization. We intend to continue to out-license technologies and product opportunities that we have already developed to a certain stage and that are outside of our core strategic focus. Collaborations and out-licensing may generate additional revenues while we progress towards the development and potential launch of our own proprietary products.

*Outsource manufacturing activities.* We intend to outsource the late stage clinical and commercial scale manufacturing of our products to conserve our capital for product development. We believe that the required late stage clinical and commercial manufacturing capacity can be obtained from contract manufacturers. With this approach, we seek manufacturers whose expertise should allow us to reduce risk and the costs normally incurred if we were to build, operate and maintain large-scale production facilities ourselves.

## **Proprietary Programs Under Development**

### ***Inhaled Ciprofloxacin***

Ciprofloxacin has been approved by the FDA as an anti-infective agent and is widely used for the acute treatment of a variety of bacterial infections, including exacerbations associated with pulmonary (respiratory) infections. Today, ciprofloxacin is approved to be delivered by oral or intravenous administration. However, these forms of ciprofloxacin are not often used chronically to prevent the pulmonary exacerbations because of their side-effects in the rest of the body and concerns about emergence of systemic microbial resistance to this antibiotic.

Inhalation delivery of antibiotics directly to the respiratory tract typically results in much higher antibiotic concentrations in the infected organ, even with relatively small doses, than the concentrations of the antibiotic that could be achieved with safe, approved doses delivered via injections or by oral administration. Furthermore, the inhalation approach may also significantly reduce the concentration of the antibiotic in the rest of the body which is beneficial to reduce systemic side-effects and the risk of antibiotic resistance. However, ciprofloxacin, like many other antibiotics, is absorbed from the respiratory tract rapidly, and therefore it would likely need to be inhaled frequently to achieve adequate anti-infectious effect. The high concentrations could also potentially cause irritation in the patient's respiratory tract as has been observed in some trials with other inhaled antibiotics. We therefore employ liposomes, which are nanoparticles made from materials similar to the lipids in the human lungs and dispersed in water, that encapsulate ciprofloxacin during storage and release it gradually upon contact with the fluid covering the respiratory tract (airways and lungs). In an animal experiment, unencapsulated ciprofloxacin delivered to the lungs of mice appeared to be rapidly absorbed into the bloodstream, with no drug detectable four hours after administration. In contrast, the liposomal formulation of ciprofloxacin produced high sustained levels of ciprofloxacin in the lungs and was still detectable at 12 hours post dosing. We have shown similarly in human clinical trials that inhaled liposomal ciprofloxacin achieves very high concentrations in the sputum from the respiratory tract of patients and results in much lower blood levels of ciprofloxacin than those seen with therapeutic, approved doses of oral or injected

ciprofloxacin. Furthermore, the slow release of ciprofloxacin allows once daily dosing, which is more convenient for patients than the twice or three times daily dosing of the two currently approved inhaled antibiotics for the management of respiratory infections in cystic fibrosis. We believe that delivering ciprofloxacin – a potent antibiotic directly to the respiratory tract by inhalation in the form of our slow release formulation may improve its safety and efficacy in the chronic management of pulmonary infections and prevent traumatic and costly pulmonary exacerbations. We also believe that for certain respiratory disease indications, it may be possible that a liposomal formulation enables better interaction of the drug with the disease target, leading to improved effectiveness over other therapies. We presently

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have under development three disease indications for this formulation that share much of the laboratory and production development efforts, as well as a common safety data base.

### **ARD-3100 Liposomal Ciprofloxacin for the Management of Infections in Cystic Fibrosis (CF) Patients**

One of our programs uses our proprietary liposomal formulation of ciprofloxacin for the management of respiratory infections caused by a microorganism, *Pseudomonas aeruginosa*, common in patients with cystic fibrosis, or CF. CF is a genetic disease that causes thick, sticky mucus to form in the lungs, pancreas and other organs. In the lungs, the mucus tends to block the airways, causing lung damage and making these patients highly susceptible to lung infections. According to the Cystic Fibrosis Foundation, CF affects roughly 30,000 children and adults in the United States and roughly 70,000 children and adults worldwide. Recent reports suggest that there may be over 100,000 largely undiagnosed CF patients in India. According to the American Lung Association, the direct medical care costs for an individual with CF in the U.S. are currently estimated to be in excess of \$40,000 per year.

The inhalation route affords direct administration of the drug to the infected parts of the lung, maximizing the dose to the affected sites and minimizing the wasteful exposure to the rest of the body where it could cause side effects. Therefore, treatment of CF-related lung infections by direct administration of antibiotics to the lung may improve both the safety and efficacy of treatment compared to systemic administration by other routes, as well as improving patient convenience as compared to injections. Oral and injectable forms of ciprofloxacin are approved for the treatment of *Pseudomonas aeruginosa*, a serious lung infection to which CF patients are vulnerable. Currently, there are two inhaled antibiotics approved for the chronic management of this infection; one of them is given twice a day and the other one three times a day. Both of these antibiotics are administered by nebulization and they are used intermittently one month on the therapy, one month off therapy. We believe that local lung delivery via inhalation of ciprofloxacin in our sustained release liposomal formulation could provide convenient, effective and safe chronic management of the debilitating and often life-threatening lung infections that afflict patients with CF. We think that once a day dosing of inhaled liposomal ciprofloxacin could also be a welcome reduction in the burden of therapy for this patient population. Furthermore, some patients may benefit from rotating two or more inhaled antibiotics so that they maintain some form of inhaled antibiotic therapy all the time. As ciprofloxacin is an antibiotic of a different class, with a different mechanism of action to the two currently approved inhaled antibiotics, its use could therefore maximize the control of respiratory infections in CF patients and avoid the side effects associated with the use of the other antibiotics. We have received orphan drug designation from the FDA for this product for the management of CF.

We believe we have the preclinical development, clinical and regulatory expertise to advance this product through development. We intend to retain marketing or co-marketing rights for the inhaled liposomal ciprofloxacin formulations in at least one of the major markets, such as United States or the European Union. The benefits of retaining such rights will need to be weighed against the cost to us of funding additional development and establishing the commercial infrastructure.

### ***Development***

We initiated preclinical studies for liposomal ciprofloxacin in 2006 and we also continued to work on new innovative formulations for this product with the view to maximize the safety, efficacy and convenience to patients. In October 2007, we completed a Phase 1 clinical trial in 20 healthy volunteers in Australia. This was a safety, tolerability and pharmacokinetic study that included single dose escalation followed by dosing for one week. Administration of the liposomal formulation by inhalation was well tolerated and no serious adverse reactions were reported. The pharmacokinetic profile obtained by measurement of blood levels of ciprofloxacin following the inhalation of the liposomal formulation was consistent with the profile from sustained release of ciprofloxacin from liposomes, supporting once daily dosing; the blood levels of ciprofloxacin were much lower than those that would be observed following administration of therapeutic doses of ciprofloxacin by injection or via the gastrointestinal tract. We believe

that this is a desirable pharmacokinetic profile likely to result in a reduction of the incidence and severity of systemic side effects of ciprofloxacin and to be less likely to lead to systemic emergence of resistant micro-organisms. Further, we believe that once a day dosing of this product could provide a significant reduction in the burden of therapy for CF patients and their healthcare providers.

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In June 2008, we completed a multi-center 14-day treatment Phase 2a trial in Australia and New Zealand in 21 CF patients to investigate safety, efficacy and pharmacokinetics of once daily inhaled liposomal ciprofloxacin. The primary efficacy endpoint in this Phase 2a study was the change from baseline in the sputum *Pseudomonas aeruginosa* colony forming units (CFU), an objective measure of the reduction in pulmonary bacterial load. Data analysis in 21 patients who completed the study demonstrated that the CFUs decreased by a mean 1.43 log over the 14-day treatment period ( $p < 0.0001$ ). Evaluation one week after study treatment was discontinued showed that the *Pseudomonas* bacterial density in the lung was still reduced from the baseline without additional antibiotic use. Pulmonary function testing as measured by the forced expiratory volume in one second (FEV1) showed a significant mean increase of 6.86% from baseline after 14 days of treatment ( $p = 0.04$ ). The study drug was well tolerated, and there were no serious adverse events reported during the trial.

In order to expedite anticipated time to market and increase market acceptance, we have elected to deliver our formulation via nebulizer, as most CF patients already own a nebulizer and are familiar with this method of drug delivery.

**ARD-3100 and ARD-3150 Inhaled Ciprofloxacin for the Management of Infections in Non-Cystic Fibrosis Bronchiectasis (BE) Patients**

Bronchiectasis is a chronic condition characterized by abnormal dilatation of the bronchi and bronchioles associated with chronic infection. The patient's lung function is often irreversibly reduced compared to that found in healthy individuals. Bronchiectasis is frequently observed in patients with CF. However, it is a condition that affects over 110,000 people without CF in the United States and many more in other countries, and results from a cycle of inflammation, recurrent infection, and bronchial wall damage. There is currently no drug specifically approved for the treatment of non-CF bronchiectasis in the U.S. We were granted orphan drug designation in the U.S. for ARD-3100 for the management of this condition. We believe we have the preclinical development, clinical and regulatory expertise to advance this product through development. We intend to retain marketing or co-marketing rights for the inhaled liposomal ciprofloxacin formulations in the United States or another major market, such as the European Union. The benefits of retaining such rights will need to be weighed against the cost to us of funding additional development and establishing the commercial infrastructure.

***Development***

We have been testing two formulations of inhaled ciprofloxacin (ARD-3100 and ARD-3150) that differ in the proportion of rapidly available and slow release ciprofloxacin. ARD-3150 (also called Pulmaquin<sup>tm</sup>) uses the slow release liposomal formulation (ARD-3100, also called Lipoquin<sup>tm</sup>) mixed with a small amount of ciprofloxacin dissolved in an aqueous medium.

Pre-clinical and clinical activities described above for ARD-3100 also support the ARD-3150 program.

In December 2008, we completed an open-label, four week treatment study of efficacy, safety and tolerability of once daily inhaled liposomal ciprofloxacin formulation ARD-3100 in patients with non-CF bronchiectasis. The study was conducted at eight leading centers in the United Kingdom and enrolled a total of 36 patients. The patients were randomized into two equal size groups, one receiving 3 mL of inhaled liposomal ciprofloxacin and the other receiving 6 mL of inhaled liposomal ciprofloxacin, once-a-day for the four-week treatment period. The primary efficacy endpoint was the change from baseline in the sputum *Pseudomonas aeruginosa* CFU, the standard objective measure of the reduction in pulmonary bacterial load. The 3 mL and 6 mL doses of inhaled liposomal ciprofloxacin in the evaluable patient population demonstrated similar significant mean decreases against baseline in the *Pseudomonas aeruginosa* CFUs over the 28-day treatment period of 3.5 log ( $p < 0.001$ ) and 4.0 log ( $p < 0.001$ ) units, respectively.



With regard to safety, there were no statistically significant changes in lung function for the evaluable patient population at the end of treatment as measured by the normalized forced expiratory volume in one second (FEV1% predicted). Inhaled liposomal ciprofloxacin was well tolerated: no bronchodilator use was mandated or needed before administration of the study drug. In the 3 mL group, respiratory drug-related adverse reactions were only mild. Three serious adverse events were observed in each dose group, with only one of the six classified as possibly drug-related in the 6 mL group. This particular patient suffered from a viral infection (shingles) early in the treatment period that might have been a confounding factor leading ultimately to a respiratory exacerbation requiring hospitalization.

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In November 2009, the first patient was dosed in the ORBIT-2 (Once-daily Respiratory Bronchiectasis Inhalation Treatment) trial, a 168 day, multicenter, international Phase 2b clinical trial of inhaled ciprofloxacin with the ARD-3150 formulation in 42 adult patients with non-cystic fibrosis bronchiectasis. The randomized, double-blind, placebo-controlled trial was conducted in Australia and New Zealand. Following a 14 day screening period, the patients were treated once-a-day for 28 days with either the active drug, or placebo, followed by a 28 day off-treatment period. This on-off sequence was repeated three times. The primary endpoint was defined as the mean change in *Pseudomonas aeruginosa* density in sputum (colony forming units CFU per gram) from baseline to day 28 of the active treatment group versus placebo. Safety and tolerability assessments of the treatment versus placebo group were performed and secondary efficacy endpoints assessed included long term microbiological responses, time to an exacerbation, severity of exacerbations, length of time to resolve exacerbations and changes in lung function and in quality of life measurements. ORBIT-2 explored whether the novel formulation ARD-3150, which has a different drug release profile than ARD-3100, may have additional therapeutic benefits.

In October 2010, we announced positive top line data from the ORBIT-2 study. Statistical significance was achieved in the primary endpoint – the mean change in *Pseudomonas aeruginosa* density in sputum from baseline to day 28. In the full analysis population (full analysis set includes all patients who were randomized, received at least one dose and provided samples for at least two time points), there was a significant mean reduction of 4.2 log<sub>10</sub> units in the ARD-3150 group, reflecting an almost sixteen-thousand fold decrease in bacterial load, versus a very small mean decrease of 0.1 log<sub>10</sub> units in the placebo group (p=0.004). Secondary endpoint analysis showed that 17 subjects in the placebo group required supplemental antibiotics for respiratory-related infections versus 8 subjects in the ARD-3150 group (p=0.05). As announced in January 2011, the Kaplan-Meier analysis showed that the median time to first pulmonary exacerbation in the per protocol evaluation increased from 58 days in the placebo group to 134 days in the active treatment group and was statistically significant (p<0.05, log rank test). ARD-3150 was well tolerated and there were no significant decreases in lung function, as measured by FEV1 (forced expiratory volume in one second), at 28 days in either group. Overall, the incidence and severity of adverse events were similar in both the placebo and treatment groups; however, ARD-3150 had a superior pulmonary safety profile reflected in the number and severity of pulmonary adverse events. As announced in May 2011, further statistical analysis concluded that the reduction from baseline in *Pseudomonas aeruginosa* CFUs with ARD-3150 was rapid and persistent throughout the treatment cycles as exemplified by the statistically significant reductions of the mean log CFU values in the ARD-3150 group versus the placebo at day 14 and day 28 during the first treatment cycle, as well as at the end of the second and third cycles of treatment (days 84 and 140, respectively).

In February 2010, the first patient was dosed in the U.S. as part of the ORBIT-1 trial. This Phase 2b trial, an international, double-blind, placebo-controlled study being conducted under a U.S. FDA IND, randomized 95 patients and completed enrollment in March 2011. The ORBIT-1 study design called for four weeks of once-daily inhaled doses of the active drug or once-daily inhaled placebo. Two doses of the active drug were included in the study – 100 or 150 mg ciprofloxacin delivered by inhalation as 2 or 3 mL of liposomal dispersion, respectively. The primary efficacy endpoint was a standard measure of antibacterial activity – the change from baseline in sputum *Pseudomonas aeruginosa* colony forming units (CFUs). Secondary endpoints included quality of life measurements and improvement of outcomes with respect to exacerbations. Lung function changes were monitored for safety.

In June 2011, we announced positive top line data from the ORBIT-1 study. The primary endpoint - the mean change in *Pseudomonas aeruginosa* colony forming units per gram of sputum (CFUs) from baseline to day 28 – was met in the full analysis population: The full analysis set included all patients who were randomized, received at least one dose and provided samples for at least two time points. There was a significant mean reduction (p<0.001) of 2.942 log<sub>10</sub> CFUs in the 3mL ARD-3100 group and a significant mean reduction (p< 0.001) of 3.842 log<sub>10</sub> CFUs in the 2mL ARD-3100 group compared to placebos. Pooled placebo groups had a mean reduction of log<sub>10</sub> CFUs of 0.437. There was no statistically significant difference between the 2 mL and 3 mL ARD-3100 doses. ARD-3100 was well-tolerated and no bronchodilator treatment was mandated before inhaled study treatments. There were no

statistically significant differences between the active and placebo groups in the number of patients experiencing at least one respiratory treatment-emergent adverse event. The incidence of serious adverse events (SAEs) was low; there were a total of 6 SAEs and none of them were treatment related.

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The results from each of these trials will produce an extensive data base of information from which we hope to select the optimum product and the most appropriate endpoints to test in Phase 3. In order to expedite anticipated time to market and increase market acceptance, we have elected to deliver our formulations via an FDA-approved, widely-accepted nebulizer system for each of these Phase 2b trials.

The CF and BE programs incorporate formulation and manufacturing processes and the early preclinical safety data developed for our inhalation anthrax program discussed below. We believe our inhaled ciprofloxacin could also be explored for the treatment of other serious respiratory infections, such as those occurring in severe COPD and asthma patients.

We intend to finalize development plans and budgets for the CF and BE programs in conjunction with discussions with the FDA. We are seeking partnerships for these programs in order to reduce the overall cost to us of development and to bring additional expertise for the global development and commercialization of inhaled liposomal ciprofloxacin for multiple indications.

### **ARD-1100 Liposomal Ciprofloxacin for the Treatment of Inhalation Anthrax and other biodefense purposes**

The third of our inhaled ciprofloxacin programs is for the prevention and treatment of inhaled infections, such as inhalation anthrax, tularemia and pneumonic plague. With inhalation anthrax, once symptoms appear, fatality rates are high even with the initiation of antibiotic and supportive therapy. Further, a portion of the anthrax spores, once inhaled, may remain dormant in the lung for several months and then germinate. Anthrax has been identified by the Centers for Disease Control as a likely potential agent of bioterrorism. In the fall of 2001, when anthrax-contaminated mail was deliberately sent through the United States Postal Service to government officials and members of the media, five people died and many more became sick. These attacks highlighted the concern that inhalation anthrax and other types of inhaled bacterial (e.g. tularemia and plague) bioterror agents represents a real and current threat.

Ciprofloxacin has been approved by the FDA for use orally and via injection for the treatment of inhalation anthrax (post-exposure) since 2000. Our ARD-1100 research and development program received funding from the Defence Research and Development Canada, or DRDC, a division of the Canadian Department of National Defence. We believe that our product candidate may be able to deliver a long-acting formulation of ciprofloxacin directly into the lung and could potentially have fewer side effects and be more effective to prevent and treat inhalation anthrax and other inhaled bacterial bioterrorism agents than currently available therapies.

### ***Development***

We began our research into liposomal ciprofloxacin for the treatment of inhalation anthrax under a technology demonstration program funded by the DRDC as part of their interest in developing products to counter bioterrorism. The DRDC had already demonstrated the feasibility of inhaled liposomal ciprofloxacin for post-exposure prophylaxis of *Francisella tularensis*, a potential bioterrorism agent similar to anthrax. Mice were exposed to a lethal dose of *Francisella tularensis* and then 24 hours later were exposed via inhalation to a single dose of free ciprofloxacin, liposomal ciprofloxacin or saline. All the mice in the control group and the free ciprofloxacin group were dead within 11 days post-infection; in contrast, all the mice in the liposomal ciprofloxacin group were alive 14 days post-infection. The same results were obtained when the mice received the single inhaled treatment as late as 48 or 72 hours post-infection. The DRDC provided funding for our development efforts and additional development of this program is dependent on negotiating for and obtaining additional funding from DRDC or other collaborators or sources of funding. We plan to use our preclinical and clinical safety data from our BE and CF programs to supplement the data needed to have this product candidate considered for approval for use in treating inhalation anthrax and possibly tularemia and plague.

If we can obtain sufficient additional funding, we would anticipate developing this drug for approval under FDA regulations relating to the approval of new drugs or biologics for potentially fatal diseases where human studies cannot be conducted ethically or practically. Unlike most drugs, which require large, well controlled Phase 3 clinical trials in patients with the disease or condition being targeted, these regulations allow for a drug to be evaluated and approved by the FDA on the basis of demonstrated safety in humans combined with studies in animal models to show effectiveness.

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### ***Smoking Cessation Therapy***

#### **ARD-1600 (Nicotine) Tobacco Smoking Cessation Therapy**

According to the National Center for Health Statistics ( NCHS ), 21% of the U.S. population age 18 and above currently smoke cigarettes. The World Health Organization's ( WHO ) recent report states that tobacco smoking is the single most preventable cause of death in the world today. Already tobacco kills more than five million people per year more than tuberculosis, HIV/AIDS and malaria combined. WHO warns that by 2030, the death toll could exceed eight million a year. Unless urgent action is taken, tobacco could kill one billion people during this century. According to the National Institute on Drug Abuse, more than \$75 billion of total U.S. healthcare costs each year is attributable directly to smoking. However, this cost is well below the total cost to society because it does not include burn care from smoking-related fires, perinatal care for low birth-weight infants of mothers who smoke, and medical care costs associated with disease caused by secondhand smoke. In addition to healthcare costs, the costs of lost productivity due to smoking effects are estimated at \$82 billion per year, bringing a conservative estimate of the economic burden of smoking to more than \$150 billion per year.

NCHS indicates that nicotine dependence is the most common form of chemical dependence in this country. Quitting tobacco use is difficult and often requires multiple attempts, as users often relapse because of withdrawal symptoms. Our goal is to develop an inhaled nicotine product that would address effectively the acute craving for cigarettes and, through gradual reduction of the peak nicotine levels, wean-off the patients from cigarette smoking and from the nicotine addiction.

### ***Development***

The initial laboratory work on this program was partly funded under grants from the National Institutes of Health.

We have encouraging data from our first human clinical trial delivering aqueous solutions of nicotine using the palm-size AERx Essence system. Our randomized, open-label, single-site Phase 1 trial evaluated arterial plasma pharmacokinetics and subjective acute cigarette craving when one of three nicotine doses was administered to 18 adult male smokers. Blood levels of nicotine rose much more rapidly following a single-breath inhalation compared to published data on other approved nicotine delivery systems. Cravings for cigarettes were measured on a scale from 0-10 before and after dosing for up to four hours. Prior to dosing, mean craving scores were 5.5, 5.5 and 5.0, respectively, for the three doses. At five minutes following inhalation of the nicotine solution through the AERx Essence device, craving scores were reduced to 1.3, 1.7 and 1.3, respectively, and did not return to pre-dose baseline during the four hours of monitoring. Nearly all subjects reported an acute reduction in craving or an absence of craving immediately following dosing. No serious adverse reactions were reported in the study.

We believe these results provide the foundation for further research with the AERx Essence device as a means toward smoking cessation. We are seeking collaborations with government and non-government organizations to further develop this product.

### ***Other Potential Applications***

We have demonstrated in human clinical trials to date effective deposition and, where required, systemic absorption of a wide variety of drugs, including small molecules, peptides and proteins, using our AERx delivery system. In particular, we and our former collaboration partner Novo Nordisk generated a substantial amount of preclinical and clinical data on the delivery of insulin using the AERx inhaler for the treatment of Type I and Type II diabetes. In October 2008, Novo Nordisk transferred to us, at no charge, a portfolio of inhaled insulin related patents pursuant to a license agreement between us and Novo Nordisk that was terminated in May 2008. The portfolio includes both

U.S. and foreign patents. In addition to the patent portfolio, Novo Nordisk transferred to us a significant preclinical safety database that was developed during our collaboration with Novo Nordisk, the rights to a miniaturized second-generation AERx electronic insulin inhaler and data from Novo Nordisk's inhaled insulin clinical program, which included nine Phase 3 trials in Type 1 and Type 2 diabetes patients. We continue to maintain the intellectual property portfolio related to inhaled insulin and seek to license or sell this asset.

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We are regularly examining our previously conducted preclinical and clinical programs to identify product candidates that may be suitable for further development consistent with our current business strategy. We previously demonstrated the feasibility of delivering a variety of small molecules, peptides, oligonucleotides, proteins and gene therapies via our proprietary AERx delivery system but we have not been able to continue their development due to a variety of reasons, most notably the lack of funding provided from collaborators. We seek to identify partners who may wish to license or buy these assets, in order to raise non-dilutive capital from these non-core assets.

### **Zogenix DosePro Technology**

In August 2006, we sold all of our assets related to the Intraject needle-free injector technology platform and products, including 12 United States patents along with foreign counterparts, to Zogenix, Inc., a private company. Zogenix is responsible for further development and commercialization efforts of Intraject (now rebranded under the name DosePro\*). In conjunction with the sale, we received a \$4 million initial payment from Zogenix, with an additional milestone payment of \$4 million and royalty payments payable upon any commercialization of products in the U.S. and other countries, including the European Union, developed and sold using the DosePro technology. In July 2009, Zogenix was granted approval by the FDA of the SUMAVEL DosePro (sumatriptan injection) needle-free delivery system for the treatment of acute migraine and cluster headache. In August 2009, Zogenix and Astellas Pharma US, Inc. entered into an exclusive co-promotion agreement in the U.S. for the SUMAVEL DosePro needle-free delivery system. On January 13, 2010, Zogenix announced the U.S. commercial launch of SUMAVEL DosePro. In February 2010, we received from Zogenix the \$4 million milestone payable upon the initial commercialization of SUMAVEL DosePro. In December 2010, Zogenix was granted approval of the Marketing Authorization Application ( MAA ) for SUMAVEL DosePro (sumatriptan injection) needle-free delivery system by the Danish Medicines Agency of Denmark. Denmark is the first country in Europe to grant marketing authorization for SUMAVEL DosePro. Five weeks later, the Federal Institute for Drugs and Medical Devices of Germany (BrArM) and the Medicines and Healthcare products Regulatory Agency of the United Kingdom (MHRA) granted approval of the MAA for SUMAVEL DosePro (sumatriptan injection) needle-free delivery system for the acute treatment of migraine attacks, with or without aura, and the acute treatment of cluster headache. Germany and the United Kingdom are two of the largest pharmaceutical markets in Europe. We are entitled to 3% royalty on net sales of SUMAVEL DosePro in all territories.

### **Pulmonary Drug Delivery Background**

Pulmonary delivery describes the delivery of drugs by inhalation and is a common method of treatment of many respiratory diseases, including asthma, chronic bronchitis, cystic fibrosis and bronchiectasis. The current global market for inhalation products includes delivery through metered-dose inhalers, dry powder inhalers and nebulizers. The advantage of inhalation delivery for the diagnosis, prevention and treatment of lung disease is that the active agent is delivered in high concentration directly to the desired targets in the respiratory tract while keeping the body's exposure to the rest of the drug, and resulting side effects, at a minimum. Over the last two decades, there has also been increased interest in the use of the inhalation route for systemic delivery of drugs throughout the body, either for the purpose of rapid onset of action or to enable noninvasive delivery of drugs that are not orally bioavailable.

### **The AERx Delivery Technology**

The AERx delivery technology provides an efficient and reproducible means of targeting drugs to the diseased parts of the lung, or to the lung for systemic absorption, through a combination of fine mist generation technology and breath control mechanisms. Similar to nebulizers, the AERx delivery technology is capable of generating aerosols from simple liquid drug formulations, avoiding the need to develop complex dry powder or other formulations. However, in contrast to nebulizers, AERx is a hand-held unit that can deliver the required dosage typically in one or two breaths in a matter of seconds due to its enhanced efficiency compared to nebulization treatments, which



commonly last about 15 minutes. We believe the ability to make small micron-size droplets from a hand-held device that incorporates breath control will be the preferred method of delivery for many medications.

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We have demonstrated in the laboratory and in many human clinical trials that our AERx delivery system enables pulmonary delivery of a wide range of pharmaceuticals in liquid formulations for local or systemic effects. Our proprietary technologies focus principally on delivering liquid medications through small particle aerosol generation and controlling patient inhalation technique for efficient and reproducible delivery of the aerosol drug to the deep lung. We have developed these proprietary technologies through an integrated approach that combines expertise in physics, engineering and pharmaceutical sciences.

The various forms of our AERx technology have been extensively tested in the laboratory and in over 50 human clinical trials with 19 different small molecules, peptides and proteins. We also conducted two human clinical trials (with treprostinil and with nicotine) with the latest version of our inhalation technology, the AERx Essence<sup>®</sup> system. This system retains the key features of breath control and aerosol quality of the previous generations of the AERx technology, but the patient is provided with a much smaller, palm-sized device. The device is easy to use and maintain and it does not require any batteries or external electrical power.

While the development of AERx product candidates is currently dormant, we believe that we could restart the development effort if sufficient funding or a collaboration is secured. We seek to identify partners who may wish to license or buy this asset in order to raise non-dilutive capital.

## **Formulation Technologies**

We have a number of formulation technologies for drugs delivered by inhalation. We have proprietary knowledge and trade secrets relating to the formulation of drugs to achieve products with adequate stability and safety, and for the manufacture and testing of inhaled drug formulations. We have been exploring the use of liposomal formulations of drugs that may be used for the prevention and treatment of respiratory diseases. Liposomes are lipid-based nanoparticles dispersed in water that encapsulate the drug during storage, and release the drug slowly upon contact with fluid covering the airways and the lung. We have experience in the development of liposomal formulations specifically for those drugs that currently need to be dosed several times a day, or when the slow release of the drug is likely to improve the efficacy and safety profile. We believe a liposomal formulation will provide extended duration of protection and treatment against lung infection, greater convenience for the patient and reduced systemic levels of the drug. The formulation may also enable better interaction of the drug with the disease target, potentially leading to greater efficacy. We have applied this technology to ciprofloxacin.

## **Intellectual Property and Other Proprietary Rights**

Our success will depend, to a significant extent, on our ability to obtain, expand and protect our intellectual property estate, enforce patents, maintain trade secret protection and operate without infringing the proprietary rights of other parties. As of February 28, 2011, we had 97 issued United States patents, with 36 additional United States patent applications pending. In addition, we had 60 issued foreign patents and additional 29 foreign patent applications pending. The bulk of our patents and patent applications contain claims directed toward our proprietary delivery technologies, including methods for aerosol generation, devices used to generate aerosols, breath control, compliance monitoring, certain pharmaceutical formulations, design of dosage forms and their manufacturing and testing methods. In addition, we have purchased three United States patents containing claims that are relevant to our inhalation technologies. The bulk of our patents, including fundamental patents directed toward our proprietary AERx delivery technology, expire between 2013 and 2023. For certain of our formulation technologies we have in-licensed some technology and will seek to supplement such intellectual property rights with complementary proprietary processes, methods and formulation technologies, including through patent applications and trade secret protection. Because patent positions can be highly uncertain and frequently involve complex legal and factual questions, the breadth of claims obtained in any application or the enforceability of our patents cannot be predicted.

In December 2004, as part of our research and development efforts funded by the DRDC for the development of liposomal ciprofloxacin for the treatment of biological terrorism-related inhalation anthrax, we obtained worldwide exclusive rights to a patented liposomal formulation technology for the pulmonary delivery of ciprofloxacin from Tekmira Pharmaceuticals Corporation, formerly known as Inex Pharmaceuticals Corporation, and may have the ability to expand the exclusive license to other fields. We do not use Tekmira's

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liposomal formulation technology and developed our own proprietary technology for our liposomal ciprofloxacin program.

We seek to protect our proprietary position by protecting inventions that we determine are or may be important to our business. We do this, when we are able, through the filing of patent applications with claims directed toward the devices, methods and technologies we develop. Our ability to compete effectively will depend to a significant extent on our ability and the ability of our collaborators to obtain and enforce patents and maintain trade secret protection over our proprietary technologies. The coverage claimed in a patent application typically is significantly reduced before a patent is issued, either in the United States or abroad. Consequently, any of our pending or future patent applications may not result in the issuance of patents or, to the extent patents have been issued or will be issued, these patents may be subjected to further proceedings limiting their scope and may in any event not contain claims broad enough to provide meaningful protection. Patents that are issued to us or our collaborators may not provide significant proprietary protection or competitive advantage, and may be circumvented or invalidated.

We also rely on our trade secrets and the know-how of our officers, employees, consultants and other service providers. Our policy is to require our officers, employees, consultants and advisors to execute proprietary information and invention assignment agreements upon commencement of their relationships with us. These agreements provide that all confidential information developed or made known to the individual during the course of the relationship shall be kept confidential except in specified circumstances. These agreements also provide that all inventions developed by the individual on behalf of us shall be assigned to us and that the individual will cooperate with us in connection with securing patent protection for the invention if we wish to pursue such protection. These agreements may not provide meaningful protection for our inventions, trade secrets or other proprietary information in the event of unauthorized use or disclosure of such information.

We also execute confidentiality agreements with outside collaborators and consultants. However, disputes may arise as to the ownership of proprietary rights to the extent that outside collaborators or consultants apply technological information developed independently by them or others to our projects, or apply our technology or proprietary information to other projects, and any such disputes may not be resolved in our favor. Even if resolved in our favor, such disputes could result in substantial expense and diversion of management attention.

In addition to protecting our own intellectual property rights, we must be able to develop products without infringing the proprietary rights of other parties. Because the markets in which we operate involve established competitors with significant patent portfolios, including patents relating to compositions of matter, methods of use, methods of delivery and products in those markets, it may be difficult for us to develop products without infringing the proprietary rights of others.

We would incur substantial costs if we are required to defend ourselves in suits, regardless of their merit. These legal actions could seek damages and seek to enjoin development, testing, manufacturing and marketing of the allegedly infringing product. In addition to potential liability for significant damages, we could be required to obtain a license to continue to manufacture or market the allegedly infringing product and any license required under any such patent may not be available to us on acceptable terms, if at all.

We may determine that litigation is necessary to enforce our proprietary rights against others. Such litigation could result in substantial expense and diversion of management attention, regardless of its outcome and any litigation may not be resolved in our favor.

## **Competition**

We are in a highly competitive industry. We are in competition with pharmaceutical and biotechnology companies, hospitals, research organizations, individual scientists and nonprofit organizations engaged in the development of drugs and other therapies for the respiratory disease indications we are targeting. Our competitors may succeed, and many have already succeeded, in developing competing products, obtaining FDA approval for products or gaining patient and physician acceptance of products before us for the same markets and indications that we are targeting. Many of these companies, and large pharmaceutical companies in particular, have greater research and development, regulatory, manufacturing, marketing, financial and managerial resources and experience than we have and many of these companies may have products and product candidates that are in a more advanced stage

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of development than our product candidates. If we are not first to market for a particular indication, it may be more difficult for us or our collaborators to enter markets unless we can demonstrate our products are clearly superior to existing therapies.

Examples of competitive therapies include:

*ARD-3100 and ARD-3150.* There is no product approved in the United States specifically for the treatment of bronchiectasis. Currently marketed inhaled antibiotics for the management of infections associated with cystic fibrosis are TOBI\* marketed by Novartis and Cayston\* marketed by Gilead Sciences. Inhaled products under development to treat respiratory infections in CF and non-CF BE include dry powder tobramycin under development by Novartis, dry powder ciprofloxacin by Bayer, liposomal amikacin by Transave, levofloxacin by Mpex Pharmaceuticals and liposomal tobramycin by Axentis. Bayer was granted orphan drug designation in the U.S. and in the European Union for their inhaled ciprofloxacin product in development for the treatment of infections associated with cystic fibrosis.

Several of these products have substantial current sales and long histories of effective and safe use. In addition, we believe there are a number of additional drug candidates in various stages of development that, if approved, could compete with any future products we may develop. Moreover, one or more of our competitors that have developed or are developing pulmonary drug delivery technologies, such as Alkermes, MAP, Mannkind or Alexza Pharmaceuticals, or other competitors with alternative drug delivery methods, may negatively impact our potential competitive position.

We believe that our respiratory expertise and pulmonary delivery and formulation technologies provide us with an important competitive advantage for our potential products. We intend to compete by developing products that are safer, more efficacious, more convenient, less costly, earlier to market or cheaper to develop than existing products, or any combination of the foregoing.

## **Government Regulation**

### ***United States***

The research, development, testing, manufacturing, labeling, advertising, promotion, distribution, marketing and export, among other things, of any products we develop are subject to extensive regulation by governmental authorities in the United States and other countries. The FDA regulates drugs in the United States under the FDCA and implementing regulations thereunder.

If we fail to comply with the FDCA or FDA regulations, we and our products could be subject to regulatory actions. These may include delay in approval or refusal by the FDA to approve pending applications, injunctions ordering us to stop sale of any products we develop, seizure of our products, warning letters, imposition of civil penalties or other monetary payments, criminal prosecution, and recall of our products. Any such events would harm our reputation and our results of operations.

Before any of our drugs may be marketed in the United States, it must be approved by the FDA. None of our current product candidates has received such approval. We believe that our products currently in development will be regulated by the FDA as drugs.

The steps required before a drug may be approved for marketing in the United States generally include:

preclinical laboratory and animal tests, and formulation studies;

the submission to the FDA of an Investigational New Drug application, or IND, for human clinical testing that must become effective before human clinical trials may begin;

adequate and well controlled human clinical trials to establish the safety and efficacy of the product candidate for each indication for which approval is sought;

the submission to the FDA of a New Drug Application, or NDA, and FDA's acceptance of the NDA for filing;

satisfactory completion of an FDA inspection of the manufacturing facilities at which the product is to be produced to assess compliance with the FDA's Good Manufacturing Practices, or GMP; and

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FDA review and approval of the NDA.

### ***Preclinical Testing***

The testing and approval process requires substantial time, effort, and financial resources, and the receipt and timing of approval, if any, is highly uncertain. Preclinical tests include laboratory evaluations of product chemistry, toxicity, and formulation, as well as animal studies. The results of the preclinical studies, together with manufacturing information and analytical data, are submitted to the FDA as part of the IND. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA raises concerns or questions about the conduct of the proposed clinical trials as outlined in the IND prior to that time. In such a case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. Submission of an IND may not result in FDA authorization to commence clinical trials. Once an IND is in effect, the protocol for each clinical trial to be conducted under the IND must be submitted to the FDA, which may or may not allow the trial to proceed.

In July 2009, we received clearance from the FDA for our IND for inhaled liposomal ciprofloxacin for the treatment of non-cystic fibrosis bronchiectasis. In May 2010, we received clearance from the FDA for our IND for inhaled liposomal ciprofloxacin for the treatment of cystic fibrosis. However, an additional three month toxicity study in animals with ARD-3100 and ARD-3150 has been requested by the FDA to support longer term human clinical trials. The analysis of the results of this study is underway, but there is no guarantee that the results of this study will satisfy the FDA and other regulatory authorities that we can conduct longer term human clinical trials, or that additional animal safety studies will not be required to support approval for marketing these products.

### ***Clinical Trials***

Clinical trials involve the administration of the investigational drug to human subjects under the supervision of qualified investigators and healthcare personnel. Clinical trials are conducted under protocols detailing, for example, the parameters to be used in monitoring patient safety and the safety and effectiveness criteria, or end points, to be evaluated. Clinical trials are typically conducted in three defined phases, but the phases may overlap or be combined. Each trial must be reviewed and approved by an independent institutional review board overseeing the institution conducting the trial before it can begin.

These phases generally include the following:

*Phase 1.* Phase 1 clinical trials usually involve the initial introduction of the drug into human subjects, frequently healthy volunteers. In Phase 1, the drug is usually evaluated for safety, including adverse effects, dosage tolerance, absorption, distribution, metabolism, excretion and pharmacodynamics.

*Phase 2.* Phase 2 usually involves studies in a limited patient population with the disease or condition for which the drug is being developed to (1) preliminarily evaluate the efficacy of the drug for specific, targeted indications; (2) determine dosage tolerance and appropriate dosage; and (3) identify possible adverse effects and safety risks.

*Phase 3.* If a drug is found to be potentially effective and to have an acceptable safety profile in preclinical (animal), Phase 1 and Phase 2 human studies, the clinical trial program will be expanded, usually to further evaluate clinical efficacy and safety by administering the drug in its final form to an expanded patient population at geographically dispersed clinical trial sites. Phase 3 studies usually include several hundred to several thousand patients.



In November 2009, the first patient was dosed in the ORBIT-2 (Once-daily Respiratory Bronchiectasis Inhalation Treatment) trial, a 168 day, multicenter, international Phase 2b clinical trial of inhaled ciprofloxacin with the ARD-3150 (Pulmaquin) formulation in 42 adult patients with non-cystic fibrosis bronchiectasis. The randomized, double-blind, placebo-controlled trial was conducted in Australia and New Zealand. Following a 14 day screening period, the patients were treated once-a-day for 28 days with either the active drug, or placebo, followed by a 28 day off-treatment period. This on-off sequence was repeated three times. The primary endpoint was defined as the mean change in *Pseudomonas aeruginosa* density in sputum (colony forming units CFU per gram) from baseline to day 28 of the active treatment group versus placebo. Safety and tolerability assessments

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of the treatment versus placebo group were performed and secondary efficacy endpoints being assessed included long term microbiological responses, time to an exacerbation, severity of exacerbations, length of time to resolve exacerbations and changes in lung function and in quality of life measurements. ORBIT-2 explored whether the novel formulation ARD-3150, which has a different drug release profile than ARD-3100, may have additional therapeutic benefits.

In October 2010, we announced positive top line data from the ORBIT-2 study. Statistical significance was achieved in the primary endpoint – the mean change in *Pseudomonas aeruginosa* density in sputum from baseline to day 28. In the full analysis population (full analysis set includes all patients who were randomized, received at least one dose and provided samples for at least two time points), there was a significant mean reduction of 4.2 log<sub>10</sub> units in the ARD-3150 group, reflecting an almost sixteen-thousand fold decrease in bacterial load, versus a very small mean decrease of 0.1 log<sub>10</sub> units in the placebo group (p=0.004). Secondary endpoint analysis showed that 17 subjects in the placebo group required supplemental antibiotics for respiratory-related infections versus 8 subjects in the ARD-3150 group (p=0.05). As announced in January 2011, the Kaplan-Meier analysis showed that the median time to first pulmonary exacerbation in the per protocol evaluation increased from 58 days in the placebo group to 134 days in the active treatment group and was statistically significant (p<0.05, log rank test). ARD-3150 was well tolerated and there were no significant decreases in lung function, as measured by FEV1 (forced expiratory volume in one second), at 28 days in either group. Overall, the incidence and severity of adverse events were similar in both the placebo and treatment groups; however, ARD-3150 had a superior pulmonary safety profile reflected in the number and severity of pulmonary adverse events. As announced in May 2011, further statistical analysis concluded that the reduction from baseline in *Pseudomonas aeruginosa* CFUs with ARD-3150 was rapid and persistent throughout the treatment cycles as exemplified by the statistically significant reductions of the mean log CFU values in the ARD-3150 group versus the placebo at day 14 and day 28 during the first treatment cycle, as well as at the end of the second and third cycles of treatment (days 84 and 140, respectively).

In February 2010, the first patient was dosed in the U.S. as part of the ORBIT-1 trial. This Phase 2b trial, an international, double-blind, placebo-controlled study being conducted under a U.S. FDA IND, randomized 95 patients and completed enrollment in March 2011. The ORBIT-1 study design called for four weeks of once-daily inhaled doses of the active drug or once-daily inhaled placebo. Two doses of the active drug were included in the study – 100 or 150 mg ciprofloxacin delivered by inhalation as 2 or 3 mL of liposomal dispersion, respectively. The primary efficacy endpoint was a standard measure of antibacterial activity – the change from baseline in sputum *Pseudomonas aeruginosa* colony forming units (CFUs). Secondary endpoints included quality of life measurements and improvement of outcomes with respect to exacerbations. Lung function changes were monitored for safety.

In June 2011, we announced positive top line data from the ORBIT-1 study. The primary endpoint - the mean change in *Pseudomonas aeruginosa* colony forming units per gram of sputum (CFUs) from baseline to day 28 – was met in the full analysis population: The full analysis set included all patients who were randomized, received at least one dose and provided samples for at least two time points. There was a significant mean reduction (p<0.001) of 2.942 log<sub>10</sub> CFUs in the 3mL ARD-3100 group and a significant mean reduction (p< 0.001) of 3.842 log<sub>10</sub> CFUs in the 2mL ARD-3100 group compared to placebos. Pooled placebo groups had a mean reduction of log<sub>10</sub> CFUs of 0.437. There was no statistically significant difference between the 2 mL and 3 mL ARD-3100 doses. ARD-3100 was well-tolerated and no bronchodilator treatment was mandated before inhaled study treatments. There were no statistically significant differences between the active and placebo groups in the number of patients experiencing at least one respiratory treatment-emergent adverse event. The incidence of serious adverse events (SAEs) was low; there were a total of 6 SAEs and none of them were treatment related.

Phase 1, Phase 2, or Phase 3 clinical trials may not be completed successfully within any specified period of time, if at all. Further, we or the FDA may suspend clinical trials at any time on various grounds, including a finding that the patients are being exposed to an unacceptable health risk.

Assuming successful completion of the required clinical testing, the results of preclinical studies and clinical trials, together with detailed information on the manufacture and composition of the product, are submitted to the FDA in the form of an NDA requesting approval to market the product for one or more indications. Before approving an application, the FDA usually will inspect the facility or facilities at which the product is manufactured,

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and will not approve the product unless continuing GMP compliance is satisfactory. If the FDA determines the NDA is not acceptable, the FDA may outline the deficiencies in the NDA and often will request additional information or additional clinical trials. Notwithstanding the submission of any requested additional testing or information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

If regulatory approval of a product is granted, such approval will usually entail limitations on the indicated uses for which the product may be marketed. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory requirements and conditions of approvals are not maintained, if GMP compliance is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require post-marketing studies, referred to as Phase 4 studies, to monitor the effect of approved products and may limit further marketing of the product based on the results of these post-marketing studies.

After approval, certain changes to the approved product, such as adding new indications, certain manufacturing changes, or additional labeling claims are subject to further FDA review and approval. Post-approval marketing of products can lead to new findings about the safety or efficacy of the products. This information can lead to a product sponsor making, or the FDA requiring, changes in the labeling of the product or even the withdrawal of the product from the market.

### ***Section 505(b)(2) Applications***

Some of our product candidates may be eligible for submission of applications for approval under the FDA's Section 505(b)(2) approval process, which requires less information than the NDAs described above. Section 505(b)(2) applications may be submitted for drug products that represent a modification (*e.g.*, a new indication or new dosage form) of an eligible approved drug and for which investigations other than bioavailability or bioequivalence studies are essential to the drug's approval. Section 505(b)(2) applications may rely on the FDA's previous findings for the safety and effectiveness of the listed drug, scientific literature, and information obtained by the 505(b)(2) applicant needed to support the modification of the listed drug. For this reason, preparing Section 505(b)(2) applications is generally less costly and time-consuming than preparing an NDA based entirely on new data and information from a full set of clinical trials. The law governing Section 505(b)(2) or FDA's current policies may change in such a way as to adversely affect our applications for approval that seek to utilize the Section 505(b)(2) approach. Such changes could result in additional costs associated with additional studies or clinical trials and delays.

The FDCA provides that reviews and/or approvals of applications submitted under Section 505(b)(2) may be delayed in various circumstances. For example, the holder of the NDA for the listed drug may be entitled to a period of market exclusivity, during which the FDA will not approve, and may not even review a Section 505(b)(2) application from other sponsors. If the listed drug is claimed by a patent that the NDA holder has listed with the FDA, the Section 505(b)(2) applicant must submit a patent certification. If the 505(b)(2) applicant certifies that the patent is invalid, unenforceable, or not infringed by the product that is the subject of the Section 505(b)(2), and the 505(b)(2) applicant is sued within 45 days of its notice to the entity that holds the approval for the listed drug and the patent holder, the FDA will not approve the Section 505(b)(2) application until the earlier of a court decision favorable to the Section 505(b)(2) applicant or the expiration of 30 months. The regulations governing marketing exclusivity and patent protection are complex, and it is often unclear how they will be applied in particular circumstances.

In addition, both before and after approval is sought, we are required to comply with a number of FDA requirements. For example, we are required to report certain adverse reactions and production problems, if any, to the FDA, and to comply with certain limitations and other requirements concerning advertising and promotion for our products. Also, quality control and manufacturing procedures must continue to conform to continuing GMP after approval, and the FDA periodically inspects manufacturing facilities to assess compliance with continuing GMP. In addition, discovery

of problems, such as safety problems, may result in changes in labeling or restrictions on a product manufacturer or NDA holder, including removal of the product from the market.

**Table of Contents*****Orphan Drug Designation***

The FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition which generally is a disease or condition that affects fewer than 200,000 individuals in the United States. A sponsor may request orphan drug designation of a previously unapproved drug, or of a new indication for an already marketed drug. Orphan drug designation must be requested before an NDA is submitted. If the FDA grants orphan drug designation, which it may not, the identity of the therapeutic agent and its potential orphan status are publicly disclosed by the FDA. Orphan drug designation does not convey an advantage in, or shorten the duration of, the review and approval process. If a drug which has orphan drug designation subsequently receives the first FDA approval for the indication for which it has such designation, the drug is entitled to orphan drug exclusivity, meaning that the FDA may not approve any other applications to market the same drug for the same indication for a period of seven years, unless the subsequent application is able to demonstrate clinical superiority in efficacy or safety. Orphan drug designation does not prevent competitors from developing or marketing different drugs for that indication, or the same drug for other indications.

We have obtained orphan drug designation from the FDA for an inhaled liposomal ciprofloxacin formulation (ARD-3100) for the management of cystic fibrosis and non-cystic fibrosis bronchiectasis. We requested orphan drug designation from the FDA for ARD-3150 for the management of bronchiectasis and in June 2011 we were granted orphan drug designation for ciprofloxacin for inhalation for this indication. We may seek orphan drug designation for other eligible product candidates we develop. However, our liposomal ciprofloxacin may not receive orphan drug marketing exclusivity. Also, it is possible that our competitors could obtain approval, and attendant orphan drug designation or exclusivity, for products that would preclude us from marketing our liposomal ciprofloxacin for this indication for some time.

Foreign regulatory authorities may also provide for orphan drug designations in countries outside the United States. For example, under European guidelines, Orphan Medicinal Product Designation provides 10 years of potential market exclusivity if the product candidate is the first product candidate for the indication approved for marketing in the European Union. Orphan drug designation also allows the candidate's sponsor to seek assistance from the European Medicines Agency in optimizing the candidate's clinical development through participation in designing the clinical protocol and preparing the marketing application. Additionally, a drug candidate designated by the Commission as an Orphan Medicinal Product may qualify for a reduction in regulatory fees as well as a European Union-funded research grant.

In August 2009, the European Medicines Agency granted Orphan Drug Designation to our inhaled liposomal ciprofloxacin drug product candidate ARD-3100 for the management of lung infections associated with cystic fibrosis. In June 2011, we were granted orphan drug designation by the FDA for ciprofloxacin for inhalation for the management of bronchiectasis.

***International Regulation***

We are also subject to foreign regulatory requirements governing clinical trials, product manufacturing, marketing and product sales. Our ability to market and sell our products in countries outside the United States will depend upon receiving marketing authorization(s) from appropriate regulatory authorities. We will only be permitted to commercialize our products in a foreign country if the appropriate regulatory authority is satisfied that we have presented adequate evidence of safety, quality and efficacy. Whether or not FDA approval has been obtained, approval of a product by the comparable regulatory authorities of foreign countries must be obtained prior to the commencement of marketing of the product in those countries. Approval of a product by the FDA does not assure approval by foreign regulators. Regulatory requirements, and the approval process, vary widely from country to country, and the time, cost and data needed to secure approval may be longer or shorter than that required for FDA approval. The regulatory approval and oversight process in other countries includes all of the risks associated with the

FDA process described above.

**Scientific Advisory Board**

We have assembled a scientific advisory board comprised of scientific and product development advisors who provide expertise, on a consulting basis from time to time, in the areas of respiratory diseases, allergy and

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immunology, pharmaceutical development and drug delivery, including pulmonary delivery, but are employed elsewhere on a full-time basis. As a result, they can only spend a limited amount of time on our affairs. We access scientific and medical experts in academia, as needed, to support our scientific advisory board. The scientific advisory board assists us on issues related to potential product applications, product development and clinical testing. Its members, and their affiliations and areas of expertise, include:

<b>Name</b>	<b>Affiliation</b>	<b>Area of Expertise</b>
Peter R. Byron, Ph.D.	Medical College of Virginia, Virginia Commonwealth University	Aerosol Science/Pharmaceutics
Peter S. Creticos, M.D.	The Johns Hopkins University School of Medicine	Allergy/Immunology/Asthma
Stephen J. Farr, Ph.D.	Zogenix, Inc.	Pulmonary Delivery/Pharmaceutics
Michael Konstan, M.D.	Rainbow Babies and Children's Hospital	Pulmonary Diseases/Cystic Fibrosis
Babatunde Otulana, M.D.	Aerovance, Inc.	Pulmonary Diseases/Cystic Fibrosis/Regulatory
Adam Wanner, M.D.	University of Miami	Chronic Obstructive Pulmonary Diseases (COPD)
Martin Wasserman, Ph.D.	Roche, AtheroGenics (retired)	Asthma

In addition to our scientific advisory board, for certain indications and programs we assemble groups of experts to assist us on issues specific to such indications and programs.

**Employees**

As of December 31, 2010, we had twelve employees. Seven employees are involved in research and development and product development and five employees are involved in finance and administration. Five employees have advanced scientific degrees.

Our employees are not represented by any collective bargaining agreement.

We also utilize an international network of consultants and contractors, such as clinical research organizations (CROs), clinical manufacturing organizations (CMOs) and various specialists in areas, such as regulatory affairs and business and corporate development.

**Corporate History and Website Information**

We were incorporated in California in 1991. Our principal executive offices are located at 3929 Point Eden Way, Hayward, California 94545, and our main telephone number is (510) 265-9000. Investors can obtain access to our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and all amendments to these reports, free of charge, on our website at <http://www.aradigm.com> as soon as reasonably practicable after such filings are electronically filed with the Securities and Exchange Commission or SEC. Information contained on our website is not part of this prospectus or of our other filings with the SEC. The public may read and copy any material we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.W., Washington, D.C., 20549. The public may obtain information on the operations of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site, <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.



We have adopted a code of ethics, which is part of our Code of Business Conduct and Ethics that applies to all of our employees, including our principal executive officer and our principal financial and accounting officer. This code of ethics is posted on our website. If we amend or waive a provision of our Code of Business Conduct and Ethics, we intend to post such amendment or waiver on our website, as required by applicable rules.

**Table of Contents****DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE****Executive Officers and Directors**

Our directors and executive officers and their ages as of March 31, 2011 are as follows:

<b>Name</b>	<b>Age</b>	<b>Position</b>
Igor Gonda, Ph.D.	63	President, Chief Executive Officer and Director
Nancy E. Pecota	51	Vice President, Finance and Chief Financial Officer
Frank H. Barker(1)(2)(3)	80	Director
Tamar D. Howson(2)	62	Director
John M. Siebert, Ph.D.(1)(2)(3)	71	Director
Virgil D. Thompson(1)(2)(3)	71	Chairman of the Board and Director

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Member of the Nominating and Corporate Governance Committee.

*Igor Gonda, Ph.D.* has served as our President and Chief Executive Officer since August 2006 and as a director since September 2001. From December 2001 to August 2006, Dr. Gonda was the Chief Executive Officer and Managing Director of Acrux Limited, a publicly traded specialty pharmaceutical company located in Melbourne, Australia. From July 2001 to December 2001, Dr. Gonda was our Chief Scientific Officer and, from October 1995 to July 2001, was our Vice President, Research and Development. From February 1992 to September 1995, Dr. Gonda was a Senior Scientist and Group Leader at Genentech, Inc. His key responsibilities at Genentech were the development of the inhalation delivery of rhDNase (Pulmozyme) for the treatment of cystic fibrosis and non-parenteral methods of delivery of biologics. Prior to that, Dr. Gonda held academic positions at the University of Aston in Birmingham, United Kingdom, and the University of Sydney, Australia. Dr. Gonda holds a B.Sc. in Chemistry and a Ph.D. in Physical Chemistry from Leeds University, United Kingdom. Dr. Gonda was the Chairman of our Scientific Advisory Board until August 2006.

*Nancy E. Pecota* has served as our Vice President, Finance and Chief Financial Officer since September 2008. From October 2005 to July 2008, Ms. Pecota was the Chief Financial Officer for NuGEN Technologies, Inc., a privately held life sciences tools company. From August 2003 to September 2005, Ms. Pecota was a consultant for early to mid-stage biopharmaceutical companies assisting them in developing fundable business models and assessing and improving internal financial preparation and reporting processes. From March 2001 to April 2003, she was Vice President, Finance and Administration at Signature BioScience, Inc., a privately held biopharmaceutical company. Prior to that, she was Director, Finance and Accounting for ACLARA BioSciences, Inc., a publicly traded biotechnology company. Ms. Pecota holds a B.S. in Economics from San Jose State University.

*Frank H. Barker* has been a director since May 1999. From January 1980 to January 1994, Mr. Barker served as a company group chairman of Johnson & Johnson, Inc., a diversified health care company, and was Corporate Vice President from January 1989 to January 1996. Mr. Barker retired from Johnson & Johnson, Inc. in January 1996.

Mr. Barker holds a B.A. in Business Administration from Rollins College, Winter Park, Florida.

*Tamar D. Howson* has been a director since November 2010. From 2001 to 2007, she served as Senior Vice President of Corporate and Business Development and was a member of the executive committee at Bristol-Myers Squibb Company (Bristol-Myers). During her tenure at Bristol-Myers, Ms. Howson was responsible for leading the company's efforts in external alliances, licensing and acquisitions. From 1991 to 2000, Ms. Howson served as Senior Vice President and Director of Business Development at SmithKline Beecham plc, a global pharmaceutical company. She also managed SR One Ltd., a venture capital fund of SmithKline Beecham, plc. From 1990 to 1991, Ms. Howson held the position of Vice President, Venture Investments at Johnston Associates, Inc., and from 1987 to 1990, she served as Director of Worldwide Business Development and Licensing for Squibb Corporation. She previously served as Executive Vice President of Corporate Development for Lexicon Pharmaceuticals, Inc. and on the boards of Ariad Pharmaceuticals, Inc., SkyePharma, plc, NPS Pharmaceuticals, Inc., Targacept, Inc., and the

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Healthcare Businesswomen's Association. Ms. Howson received her MBA in finance and international business from Columbia University. She holds an MS from the City College of New York and a BS from Technion in Israel. Tamar Howson is currently a partner with JSB-Partners, LP, a transaction advisory firm serving the life sciences industry. She is also a consultant to Pitango Venture Fund, and a member of the advisory board to Triana Venture Partners, Inc. She serves on the boards of Soligenix, Inc., OXIGENE, Inc., Idenix Pharmaceuticals, Inc., and S\*Bio Pte Ltd.

*John M. Siebert, Ph.D.* has been a director since November 2006. From May 2003 to October 2008, Dr. Siebert was the Chairman and Chief Executive Officer of CyDex, Inc., a privately held specialty pharmaceutical company. From September 1995 to April 2003, he was President and Chief Executive Officer of CIMA Labs Inc., a publicly traded drug delivery company, and from July 1995 to September 1995 he was President and Chief Operating Officer of CIMA Labs. From 1992 to 1995, Dr. Siebert was Vice President, Technical Affairs at Dey Laboratories, Inc., a privately held pharmaceutical company. From 1988 to 1992, he worked at Bayer Corporation. Prior to that, Dr. Siebert was employed by E.R. Squibb & Sons, Inc., G.D. Searle & Co. and The Procter & Gamble Company. Dr. Siebert holds a B.S. in Chemistry from Illinois Benedictine University, an M.S. in Organic Chemistry from Wichita State University and a Ph.D. in Organic Chemistry from the University of Missouri. Dr. Siebert is the Chairman of our audit committee and the designated audit committee financial expert.

*Virgil D. Thompson* has been a director since June 1995 and has been Chairman of the Board since January 2005. Since July 2009, Mr. Thompson has been Chief Executive Officer and a director of Spinnaker Biosciences, Inc., a privately held ophthalmic drug delivery company. From November 2002 until June 2007, Mr. Thompson served as President and Chief Executive Officer of Angstrom Pharmaceuticals, Inc., a privately held pharmaceutical company. From September 2000 to November 2002, Mr. Thompson was President, Chief Executive Officer and a director of Chimeric Therapies, Inc., a privately held biotechnology company. From May 1999 until September 2000, Mr. Thompson was the President, Chief Operating Officer and a director of Savient Pharmaceuticals, a publicly traded specialty pharmaceutical company. From January 1996 to April 1999, Mr. Thompson was the President and Chief Executive Officer and a director of Cytel Corporation, a publicly traded biopharmaceutical company that was subsequently acquired by IDM Pharma, Inc. From 1994 to 1996, Mr. Thompson was President and Chief Executive Officer of Cibus Pharmaceuticals, Inc., a privately held drug delivery device company. From 1991 to 1993, Mr. Thompson was President of Syntex Laboratories, Inc., a U.S. subsidiary of Syntex Corporation, a publicly traded pharmaceutical company. Mr. Thompson holds a B.S. in Pharmacy from Kansas University and a J.D. from The George Washington University Law School. Mr. Thompson is a director and chairman of the board of Questcor Pharmaceuticals, Inc., a publicly traded pharmaceutical company, and a director of Savient Pharmaceuticals and Soligenix, Inc.

The following is a brief discussion of the specific experience, qualifications, attributes or skills that led to the conclusion that our directors and nominees should serve as one of our directors at this time:

We believe that our directors have an appropriate balance of knowledge, experience, attributes, skills and expertise required for our Board as a whole and that we have sufficient independent directors to comply with applicable laws and regulations. We believe that our directors have a broad range of personal characteristics including leadership, management, scientific, technological, business, marketing and financial experience and abilities to act with integrity, with sound judgment and collegiality, to consider strategic proposals, to assist with the development of our strategic plan and oversee its implementation, to oversee our risk management efforts and executive compensation, to provide leadership, to provide required expertise on Board committees and to commit the requisite time for preparation and attendance at Board and committee meetings.

In addition, four of our five directors are independent under the listing standards of the Nasdaq Global Market (Nasdaq) (Dr. Gonda, our Chief Executive Officer, being the only exception as he is an employee) and our Nominating and Corporate Governance Committee believes that all five directors are independent of the influence of

any particular shareholder or group of shareholders whose interests may diverge from the interests of our shareholders as a whole.

We believe that each director brings a strong background and set of skills to the Board, giving the Board as a whole competence and experience from a wide variety of areas.

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*Dr. Gonda* has served as our Chief Executive Officer since 2006 and as one of our directors since 2001. In addition to his leadership, strategic planning and extensive knowledge of the day to day operations of our business, he has a commercial, scientific and academic background in the delivery of pharmaceuticals using inhalation. His education includes degrees in chemistry and physical chemistry.

*Mr. Thompson*, our Chairman of the Board, is our longest serving director giving him substantial knowledge of our company and its business. Mr. Thompson has extensive experience in the life sciences industry and has served as an executive with numerous pharmaceutical and drug delivery companies, both public and private. He also brings experience as a director of other public and private life sciences companies. His education includes degrees in pharmacy and law.

*Mr. Barker*'s career at Johnson & Johnson, Inc., a diversified health care company, has given him broad experience in leadership, executive management, global operations and consensus building. Mr. Barker's service on our Board since 1999 has given him a substantial knowledge of our company and its business. His education includes a degree in business administration.

*Dr. Siebert* has extensive experience in the life sciences industry, including as Chairman and Chief Executive Officer of a privately held specialty pharmaceutical company, President and Chief Executive Officer of a publicly traded drug delivery company and additional management and executive management roles at drug delivery and pharmaceutical companies. Our Board has determined that Dr. Siebert's background, especially his executive management roles, qualifies him as our Audit Committee financial expert. His education includes degrees in chemistry and organic chemistry.

*Ms. Howson*, our newest director, brings a strong background and focus on strategic transactions and commercialization opportunities, particularly those with pharmaceutical companies. She currently serves as a director of several other public and private life sciences companies. Her education includes an MBA with a focus on finance and international business.

## **Independence of the Board of Directors**

We have chosen to apply the listing standards of the Nasdaq in determining the independence of our directors. The Board consults with counsel to ensure that the Board's determinations are consistent with all relevant securities and other laws and regulations regarding the definition of independent, including those set forth in pertinent listing standards of the Nasdaq, as in effect from time to time.

Consistent with these considerations, after review of all relevant transactions or relationships between each director, or any of his or her family members, and us, our senior management and our independent registered public accounting firm, the Board affirmatively has determined that the following four directors are independent within the meaning of the applicable Nasdaq listing standards: Mr. Barker, Ms. Howson, Dr. Siebert, and Mr. Thompson. In making this determination, the Board found that none of these directors had a material or disqualifying relationship with the Company. Dr. Gonda, our President and Chief Executive Officer, is not an independent director within the meaning of the applicable Nasdaq standards by virtue of his employment with Aradigm. In addition, each person who served as a director for any portion of 2010 was independent within the meaning of the applicable Nasdaq listing standards, except for Dr. Gonda.

## **Code of Ethics**

We have adopted the Aradigm Corporation Code of Business Conduct and Ethics that applies to all of our officers, directors and employees. The Code of Business Conduct and Ethics is available on our website at [www.aradigm.com](http://www.aradigm.com).

If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website.

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**COMPENSATION**

The policies of the Compensation Committee, or the Committee, with respect to the compensation of executive officers, including the Chief Executive Officer, or CEO, are designed to provide compensation sufficient to attract, motivate and retain executives of outstanding ability and potential and to establish an appropriate relationship between executive compensation and the creation of shareholder value. To meet these goals, the Committee recommends executive compensation packages to our Board of Directors that are based on a mix of salary, bonus and equity awards.

Overall, the Board and the Committee seek to provide total compensation packages that are competitive in terms of total potential value to our executives, and that are tailored to the unique characteristics of our Company in order to create an executive compensation program that will adequately reward our executives for their roles in creating value for our shareholders. The Board and the Committee intend to provide executive compensation packages that are competitive with other similarly situated companies in our industry. Historically, the Board and the Committee generally weighted executives' compensation packages more heavily in favor of equity-based compensation versus salary, as they believe performance and equity-based compensation is important to maintain a strong link between executive incentives and the creation of shareholder value. The Board and the Committee believe that performance and equity-based compensation are the most important component of the total executive compensation package for maximizing shareholder value while, at the same time, attracting, motivating and retaining high-quality executives. For 2010, the Board and the Committee continued their emphasis on equity-based compensation and placed added emphasis on contingent cash compensation payable upon the achievement of certain goals of particular importance in growing shareholder value. Given the Company's current financial situation and market capitalization, the state of the equity markets and the Company's proposed business plan, the Board and the Committee believed that equity-based compensation and contingent cash compensation payable upon the achievement of goals of particular importance to the Company remain important tools to motivate the Company's executive officers.

The Board and the Committee have reviewed this Compensation Discussion and Analysis with the Company's management.

**Benchmarking of Compensation Practices**

The Board and the Committee believe it is important when making compensation-related decisions to be informed as to current practices of similarly situated publicly held companies in the life sciences industry. In late 2008, given the Board and Committee's focus on equity-based compensation, the Board and the Committee retained a consultant to review equity-based compensation of executives in the biotechnology industry. The consultant prepared a study reviewing the equity-based compensation practices of 120 publicly held small-to-medium size biotechnology companies. In addition to this benchmarking study, the Board and the Committee take into account input from other sources, including past benchmarking studies, and publicly available data relating to the compensation practices and policies of other companies within and outside of our industry.

Benchmarking studies were used primarily in making compensation decisions for Dr. Igor Gonda, our President and Chief Executive Officer, Ms. Nancy Pecota, our Vice President, Finance and Chief Financial Officer, and Mr. D. Jeffery Grimes, our former Vice President, Legal Affairs, General Counsel & Corporate Secretary. Given the Company's operating performance and continued need for capital, in 2010 the Board and the Committee retained total cash compensation for these three executive officers at the same level as paid in 2009. Consistent with the Board's and the Committee's greater emphasis on equity-based compensation, in 2009 they sought to establish equity compensation for these three executive officers at a level approximately equal to the equity-based compensation paid at the 75th



percentile of comparable companies in the life sciences industry, based on the survey conducted in late 2008.

The Committee has in the past retained and may in the future retain the services of third-party executive compensation specialists, as the Committee sees fit, in connection with the establishment of compensation and related policies. The Committee did not retain the services of third-party executive compensation specialists for establishing 2010 compensation and related policies as these services are costly and the Company is focused on conserving cash.

**Table of Contents****Compensation Components**

*Base Salary.* Generally, the Board and the Committee believe that executive base salaries should be set near the median of the range of salaries for executives in similar positions and with similar responsibilities at comparable companies. The Board and the Committee believe that maintaining base salary amounts at or near the industry median minimizes competitive disadvantage while conserving the Company's cash resources and avoiding paying amounts in excess of what they believe to be necessary to motivate executives to meet corporate goals. Base salaries are typically reviewed annually. In the past, management has presented the Committee with its initial recommendations for executive salary levels and the Committee and Board have determined whether to adjust these base salary recommendations to realign such salaries with median market levels after taking into account individual responsibilities, performance, experience as well as the benchmarking data reviewed by the Committee.

For 2009, the Board, upon recommendation of the Committee, established base salaries for Dr. Gonda, Ms. Pecota and Mr. Grimes of \$380,000, \$238,000 and \$230,000, respectively. For 2010, management recommended to the Board and Committee that base salaries for Dr. Gonda, Ms. Pecota and Mr. Grimes be retained at their 2009 levels. Given the Company's financial position, management felt, and the Board agreed, that an increase in base salary for 2010 was not appropriate.

***Executive Bonus Plan.***

In addition to base salaries, the Board and the Committee believe that performance-based cash bonuses can play an important role in providing incentives to our executives to achieve defined corporate goals.

In early 2009, the Board, upon the recommendation of the Committee, reviewed the target bonus amount (defined as a set percentage of base salary) for each executive. The target bonus amount was set at a level that, upon achievement of 100% of the target goals, would have resulted in bonus payments that the Board and the Committee believed to be at or near the median level for target bonus amounts for comparable companies included in the benchmark studies and that, upon achievement beyond the target goals, could have resulted in bonuses of up to 150% of the target bonus amount. In early 2009, the Board, upon recommendation of the Committee, established 2009 target bonus awards (as a percentage of base salary) of 50% for Dr. Gonda and 40% for Ms. Pecota and Mr. Grimes. The Committee also reviewed a detailed set of overall corporate performance goals (target goals) prepared by management that were intended to apply to the executives' bonus awards and, with some distinctions, to the bonus awards for all of our other employees. The Committee then worked with management to develop final corporate performance goals that were set at a level the Committee believed management could achieve over the next year. For each individual corporate goal, the Committee established relative weights and then set target performance for Level 1 satisfaction (50% of target payout for that goal), Level 2 satisfaction (100% of target payout for that goal) and Level 3 satisfaction (150% of target payout for that goal) of the corporate goal, with the attainment of each specified level of performance tied to a specific percentage payout of the target bonus amount for that goal. The relative weights for each individual corporate goal could be changed by the Board during the year as a result of external and internal events and their impact upon the Company.

The goals were designed to lead to results that would maximize shareholder value. For example, at the start of 2009, the Board and Committee determined that the ARD-3100/3150 program (i.e., the Company's liposomal ciprofloxacin programs for the management of infections in patients with bronchiectasis and cystic fibrosis) would likely drive the Company's value in 2009, and so they weighted the goal related to development of the ARD-3100/3150 program higher than the other operational performance goals.

At the end of 2009, the Board, upon the recommendation of the Committee, determined the level of achievement for each corporate goal, on a goal by goal basis, and awarded credit for the achievement of goals as a percentage of the

target bonus. Final determinations as to bonus levels were then based on the achievement of these corporate goals, which are the same for all executives, as well as the Board's and the Committee's assessment as to the overall success of the Company and the development of the business.

Bonus payments under the annual bonus plan were contingent on continued employment with the Company at the end of 2009.

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In January 2010, the Board and Committee determined the executive team had satisfied corporate goals to a level that would have entitled them to a payout of 30% of their target bonus amounts. Management recommended to the Board and Committee not to pay the executives a bonus for 2009. Management felt, and the Board agreed, that given the Company's cash position and the economic climate, a bonus was not appropriate.

In January 2010, the Board, upon recommendation of the Committee, revised the Executive Bonus Plan to convert it from an annual performance evaluation period to a multi-year performance evaluation period. The Board established, upon recommendation of the Committee, performance objectives that are not dependent upon the objective being achieved within a fixed time period, in order to incentivize the executives to focus on the achievement of longer term goals that could be significant value creation events for our shareholders. The objectives focus on partnering the Company's programs, raising non-dilutive capital for the Company, advancing the ARD-3100/3150 program and the achievement of other significant strategic objectives. The bonus will be paid upon achievement of the objective and will be in the form of cash and/or restricted stock. In general, if the achievement of the objective results in the receipt of cash by the Company then the bonus will be paid in cash; if the achievement of the objective is of strategic importance to the Company but does not generate cash then the bonus will be paid in the form of restricted stock.

No payouts were made in 2010 to any executive under the revised Executive Bonus Plan.

*Equity Awards.* The Board and the Committee believe that providing a significant portion of our executives' total compensation package in stock options and restricted stock awards aligns the incentives of our executives with the interests of our shareholders and with our long-term success. The Board and the Committee develop their equity award determinations based on their judgments as to whether the complete compensation packages provided to our executives, including prior equity awards, are sufficient to retain, motivate and adequately award the executives.

We grant equity awards through our 2005 Equity Incentive Plan, which was adopted by our Board and shareholders to permit the grant of stock options, stock appreciation rights, restricted shares, restricted stock units, performance shares and other stock-based awards to our officers, directors, scientific advisory board members, employees and consultants. All of our employees, directors, scientific advisory board members and consultants are eligible to participate in the 2005 Equity Incentive Plan. All options we grant have an exercise price equal to the fair market value of our common stock on the date of grant.

For 2009, the Board and Committee decided to grant equity awards as a combination of stock options and restricted stock awards. The stock options granted in 2009 vest quarterly over two years and the restricted stock awards vest annually over one year. In July 2009, the Committee granted Dr. Gonda, Ms. Pecota and Mr. Grimes restricted stock awards for 600,000, 200,000 and 200,000 shares of our common stock, respectively. These grants vested 100% on August 1, 2010 for Dr. Gonda and Ms. Pecota. Mr. Grimes was no longer an employee of the Company on August 1, 2010; therefore, his restricted stock award did not vest. In addition, Dr. Gonda was granted two awards of 200,000 shares each, which would vest upon achievement of certain objectives related to the ARD-3100/3150 program. The Committee felt that the 2009 equity awards were necessary to bring our executives' equity compensation levels to a level the Committee believes is necessary to retain a talented and capable management team during a critical time period for the ARD-3100/3150 program. During 2010, the objectives for one of these 200,000 share awards to Dr. Gonda was met and will vest upon approval of the Compensation Committee, while the other award was cancelled for non-achievement of the stated objectives.

In September 2010, the Committee granted Dr. Gonda and Ms. Pecota restricted stock awards for 500,000 and 300,000 shares of our common stock, respectively. These grants vest 100% on September 16, 2011, contingent upon continued employment. The Committee granted these awards in order to encourage retention of executives important to the realization of the Company's business objectives.

The Committee anticipates making future equity award grants to executives annually, subject to its discretion. The Committee believes this award structure is consistent with our executive compensation policies.

*Severance Benefits.* The Board, upon recommendation of the Committee, previously adopted an Amended and Restated Executive Officer Severance Plan, dated as of December 31, 2008, and approved change of control agreements with each of our executive officers, the terms of which are more fully described below in the section entitled Potential Payments Upon Termination or Change in Control. The Board and the Committee believe these

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severance and change in control benefits are an essential element of our executive compensation package and assist us in recruiting and retaining talented individuals. Our business is inherently risky and the Board and the Committee believe the severance benefits encourage our executives to take necessary but reasonable business risks to increase shareholder value. The Board and the Committee believe the change of control benefits align our executives' interests more greatly in favor of corporate liquidity events that can be potentially valuable to our shareholders. They have established these severance and change of control benefits at levels that they feel are comparable to benefits offered to executives in similar positions and with similar responsibilities at comparable companies.

*Other Compensation.* All of our executives are eligible to participate in our employee benefit plans, including medical, dental, life insurance and 401(k) plans. These plans are available to all employees and do not discriminate in favor of executive officers. It is generally our policy to not extend significant perquisites to our executives that are not available to our employees generally. We have no current plans to make changes to levels of benefits and perquisites provided to executives.

**Summary Compensation Table**

The following table sets forth information regarding compensation earned in 2010 and 2009 by the individual serving as our principal executive officer during 2010 and our two most highly compensated executive officers (other than our principal executive officer) who were serving as executive officers at some point during the year ended 2010 (these individuals are collectively referred to as our named executive officers):

	Year	Salary (\$)	Bonus (\$)	Non-Equity Incentive			All Other Compensation (\$)	Total (\$)
				Stock Awards(1) (\$)	Option Awards(1) (\$)	Plan Compensation (\$)		
Igor Gonda, PhD President and Chief Executive Officer	2010	380,000		90,000	68,750		34,961	573,711
	2009	380,000		172,000	52,675		30,028	634,703
Nancy Pecota Vice President, Finance and Chief Financial Officer	2010	238,000		54,000	41,250		7,989	341,239
	2009	238,000		46,750	30,100		4,750	319,600
D. Jeffery Grimes(2) Former Vice President, Legal Affairs, General Counsel and Corporate Secretary	2010	108,000					188,762	296,762
	2009	230,000		46,750	30,100		14,341	321,191

(1) For 2010 and 2009, amounts represent the grant date fair value of awards and options that were issued in that year.

(2) Mr. Grimes' employment with the Company terminated as of June 18, 2010. During 2010, Mr. Grimes received \$157,374 in severance payments and \$20,078 in accrued vacation payout which are included in All Other Compensation.

All Other Compensation in the summary compensation table above includes the following components:

Name	Year	Health	Life	401(k)	Employee	All Other	Total
		Care	Insurance	Matching	Stock		
		Contribution	Premiums	Contributions	Equity		
		(\$)	(\$)	(\$)	Incentive	(\$)	(\$)
Igor Gonda, Ph.D.	2010	21,398	1,980	8,250	3,333		34,961
	2009	18,428	2,100	8,250	1,250		30,028
Nancy Pecota	2010	836	1,414	5,739			7,989
	2009	573	1,499	2,678			4,750
D. Jeffery Grimes(1)	2010	6,119	725	3,316	1,150	177,452	188,762
	2009	5,433	1,449	6,209	1,250		14,341

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- (1) Mr. Grimes' employment with the Company terminated as of June 18, 2010. During 2010, Mr. Grimes received \$157,374 in severance payments and \$20,078 in accrued vacation payout which are included in All Other Compensation.

**2010 Grants of Plan-Based Award**

The following table sets forth information regarding plan-based awards to our named executive officers in 2010:

Name	Grant Date	Approval Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)		Estimated Future Payouts Under Equity Incentive Plan Awards		All Other Option Awards:	Exercise or Base Price of Option Awards	Grant Date Fair Value of Stock and Option Awards(2)
			Target (\$)	Maximum (\$)	Target (#)	Maximum (#)	Number of Securities Underlying Options (#)	(\$/sh)	(\$)
Igor Gonda, Ph.D.	9/17/2010	9/17/2010					500,000	0.00	90,000
	9/17/2010	9/17/2010					500,000	0.18	68,750
	1/01/2010	1/01/2010							
Nancy Pecota	9/17/2010	9/17/2010					300,000	0.00	54,000
	9/17/2010	9/17/2010					300,000	0.18	41,250
	1/01/2010	1/01/2010							
D. Jeffery Grimes	1/1/2010	1/1/2010							

- (1) Reflects each executive officer's participation in our 2010 Executive Bonus Plan. The amount of bonus actually earned by each executive officer was zero, as indicated in the summary compensation table above.

- (2) The method and assumptions used to calculate the value of stock and option awards granted to our named executive officers is discussed in Note 9 of the notes to our financial statements included in this prospectus.



**Table of Contents****Outstanding Equity Awards at December 31, 2010**

The following table provides information regarding each unexercised stock equity award held by each of our named executive officers as of December 31, 2010:

Name		Option Awards				Stock Awards	
		Number of Securities		Option Exercise Price (1) (\$)	Option Expiration Date	Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$)
		Underlying Unexercised Options	Options				
		Exercisable (#)	Unexercisable (#)				
Igor Gonda, Ph.D.	(8)	62,500	437,500	0.18	9/17/2020		
	(7)					500,000	85,000
	(6)					40,000	6,800
	(2)	153,125	196,875	0.25	1/21/2019		
	(2)	375,000	125,000	1.60	12/04/2017		
	(3)					300,000	51,000
	(4)	500,000		1.87	08/10/2016		
		4,000		1.52	05/18/2016		
		4,000		5.30	05/19/2015		
		4,000		5.30	05/20/2014		
		2,000		5.30	05/13/2014		
		4,000		6.50	05/15/2013		
		4,000		4.75	02/19/2013		
		2,000		17.25	05/21/2012		
		4,000		17.15	05/17/2012		
		3,000		24.10	02/11/2012		
		500		17.20	09/20/2011		
		1,312		30.00	03/15/2011		
Nancy Pecota	(7)					300,000	51,000
	(6)					17,500	2,975
	(2)	87,500	112,500	0.25	1/21/2019		
	(5)	126,562	98,438	0.39	09/30/2018		
	(8)	37,500	262,500	0.18	9/17/2020		

(1) Represents the fair market value of a share of our common stock on the grant date of the option.

- (2) The option vests over four years with 1/16 of the shares of underlying common stock vesting every three months from the grant date.
- (3) The restricted stock award vests in full if within four years following the grant of the award the company achieves certain product and product-pipeline development milestones.
- (4) The option vests over four years with 1/4 of the shares of underlying common stock vesting on the first anniversary of the grant date and 1/48 of the shares of underlying common stock vesting each month thereafter.
- (5) The option vests over four years with 1/4 of the shares of underlying common stock vesting on the first anniversary of the grant date and 1/16 of the shares of underlying common stock vesting every three months thereafter.
- (6) Each restricted stock award will vest 1/2 of the shares on the first anniversary of the grant date and 1/2 of the shares on the second anniversary of the grant date.
- (7) Each restricted stock award will vest on September 16, 2011.

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- (8) The option vests over two years with 1/8 of the shares of underlying common stock vesting every three months from the grant date.

**2010 Option Exercises and Stock Vested**

None of our named executive officers exercised options in 2009 or 2010. Mr. Gonda had 840,000 shares of restricted stock awards vest in 2010. Ms. Pecota had 217,500 shares of restricted stock awards vest in 2010. Mr. Grimes had 17,500 shares of restricted stock awards vest in 2010.

**Pension Benefits**

None of our named executive officers participate in or have account balances in qualified or non-qualified defined benefit plans sponsored by us. The Committee may elect to adopt qualified or non-qualified defined benefit plans in the future if the Committee determines that doing so is in our best interests.

**Nonqualified Deferred Compensation**

None of our named executive officers participate in or have account balances in nonqualified defined contribution plans or other nonqualified deferred compensation plans maintained by us. The Committee may elect to provide our officers and other employees with non-qualified defined contribution or other nonqualified deferred compensation benefits in the future if the Committee determines that doing so is in our best interests.

**Potential Payments Upon Termination or Change in Control**

The following table sets forth potential payments payable to our current executive officers upon termination of employment or a change in control. The Committee may in its discretion revise, amend or add to the benefits if it deems advisable. The table below reflects amounts payable to our current executive officers assuming their employment was terminated on December 31, 2010:

Name	Benefit	Termination Without Cause Prior to a Change in Control		Termination without Cause or Constructive Termination
		Change in Control (\$)	Change in Control (\$)	Following a Change in Control (\$)
Igor Gonda, Ph.D.	Salary	380,000		760,000
	Bonus	190,000		380,000
	Option acceleration(1)			
	Stock award acceleration(1)		51,000	176,800
	Benefits continuation	21,773		43,545
				20,000

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	Career transition assistance			
	Total value:	591,773	51,000	1,380,345
Nancy Pecota	Salary	238,000		238,000
	Bonus	95,200		95,200
	Option acceleration(1)			
	Stock award acceleration(1)			53,975
	Benefits continuation	8,003		8,003
	Career transition assistance			10,000
	Total value:	341,203		405,178

(1) The value of the stock and option award acceleration was calculated using a value of \$0.17 per share of common stock, which was the last reported closing sale price of our common stock on December 31, 2010.

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*Termination without cause prior to a change in control.* If any of our executives is terminated by us without cause prior to a change in control, upon executing a general release and waiver, such executive is entitled to receive (less applicable withholding taxes) in a lump sum payment or in installments, at our discretion:

an amount equal to such executive's annual base salary;

an amount equal to 50% of annual base salary for Dr. Gonda and 40% of annual base salary for Ms. Pecota, representing historical target bonus; and

continuation of such executive's health insurance benefits for 12 months.

*Acceleration upon a change in control.* If we undergo a change in control on or prior to December 31, 2011, the 300,000 share restricted stock award granted to Dr. Gonda will vest in full.

*Termination without cause or constructive termination following a change in control.* If any of our executives is terminated by us without cause or constructively terminated (which includes a material reduction in title or duties, a material reduction in salary or benefits or a relocation of 50 miles or more) during the 18-month period following a change in control, upon executing a general release and waiver, such executive is entitled to receive (less applicable withholding taxes):

a lump sum payment equal to twice such executive's annual base salary, in the case of Dr. Gonda, and such executive's annual base salary, in the case of Ms. Pecota;

a lump sum payment equal to such executive's annual base salary multiplied by (i) 100%, in the case of Dr. Gonda, and (ii) 40%, in the case of Ms. Pecota, representing twice such executive's historical target bonus, in the case of Dr. Gonda, and such executive's historical target bonus, in the case of Ms. Pecota;

continuation of such executive's health insurance benefits for 24 months, in the case of Dr. Gonda, and 12 months, in the case of Ms. Pecota;

reimbursement of actual career transition assistance (outplacement services) incurred by such executive within six months of termination in an amount up to \$20,000, in the case of Dr. Gonda, and \$10,000, in the case of Ms. Pecota; and

acceleration of vesting of any stock options or restricted stock awards that remain unvested as of the date of such executive's termination.

**Compensation Committee Interlocks and Insider Participation**

No interlocking relationship exists between our Board or the Committee and the board of directors or the compensation committee of any other company, nor has any such interlocking relationship existed in the past.

**Non-Employee Director Compensation**

The following table sets forth a summary of the compensation we paid to our non-employee directors in 2010:

	<b>Fees Earned or</b>	<b>Option</b>	<b>Restricted Stock</b>
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<b>Name</b>	<b>Paid in Cash (\$)</b>	<b>Awards(1) (\$)</b>	<b>Awards(1) (\$)</b>	<b>Total (\$)</b>
Frank H. Barker(2)	28,000	9,140	30,000	67,140
Tamar D. Howson(3)		20,745	7,714	28,459
John M. Siebert(4)	53,000	9,140	15,000	77,140
Virgil D. Thompson(5)	62,500	9,140	25,000	96,640

(1) Amount represents the grant date fair value of options and restricted stock awards granted in 2010.

(2) Mr. Barker owns stock options for 387,500 shares of our common stock as of December 31, 2010, of which 337,500 shares are vested as of December 31, 2010. In addition, Mr. Barker owns 125,000 restricted stock awards at December 31, 2010, none of which has vested.

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- (3) Ms. Howson owns stock options for 150,000 shares of our commons stock as of December 31, 2010 of which none are vested as of December 31, 2010. In addition Ms. Howson owns 42,857 restricted stock awards at December 31, 2010, none of which has vested.
- (4) Dr. Siebert owns stock options for 370,000 shares of our common stock as of December 31, 2010, of which 320,000 shares are vested as of December 31, 2010. In addition, Dr. Siebert owns 125,000 restricted stock units at December 31, 2010, none of which has vested.
- (5) Mr. Thompson owns stock options for 449,500 shares of our common stock as of December 31, 2010, of which 399,500 shares are vested as of December 31, 2010. In addition, Mr. Thompson owns 208,333 restricted stock units at December 31, 2010, none of which has vested.

In 2011, the Chairman of the Board will receive an annual retainer in the value of \$50,000 and all other non-employee directors will receive an annual retainer in the value of \$30,000. The retainers may be paid in cash or an equivalent value of restricted stock at the option of the director. Board members also receive additional annual retainers for serving on Board committees. The additional annual retainer for the Chairman of the Audit Committee will be \$15,000 and the additional annual retainer for all other members of the Audit Committee will be \$5,000. The additional annual retainer for the Chairman of the Compensation Committee and the Chairman of the Nominating and Corporate Governance Committee will be \$10,000 and the additional annual retainer for all other members will be \$5,000. The Board retainer covers six meetings in a year and, if exceeded, the Chairman of the Board will receive \$1,500 for each additional meeting and the other Board members will receive \$1,000 for each additional meeting. If the number of meetings in a year for any given committee exceeds four, the chairman of the committee will receive \$1,500 for each additional meeting and the other committee members will receive \$1,000 for each additional meeting. Our directors are also entitled to receive reimbursement of reasonable out-of-pocket expenses incurred by them to attend Board meetings.

In addition to the cash and restricted stock compensation, each non-employee director will be granted an annual stock option grant.

**Table of Contents****SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth certain information regarding the ownership of our common stock as of July 29, 2011 by: (i) each director; (ii) each of our named executive officers; (iii) all of our executive officers and directors as a group; and (iv) all those known by us to be beneficial owners of more than five percent of our common stock.

	<b>Beneficial Ownership Common(1)</b>	
	<b>Number of Shares</b>	<b>Percent of Total (%)</b>
First Eagle Investment Management.(2) 1345 Avenue of the Americas New York, NY 10105	72,337,652	36.51
Novo Nordisk A/S(3) Novo Alle DK 2880 Bagsvaerd G7	26,204,122	13.23
Boxer Capital LLC(4) 445 Marine View Avenue Suite 100 Del Mar, CA 92014	15,651,418	7.90
Conus Partners, Inc.(5) 49 West 38th Street, 11th Floor New York, NY 10018	11,267,245	5.62
Igor Gonda, Ph.D.(6)	3,282,267	1.66
Nancy Pecota(7)	978,750	*
Virgil D. Thompson(8)	976,462	*
Frank H. Barker(9)	952,145	*
John M. Siebert, Ph.D.(10)	696,697	*
Tamar D. Howson(11)	219,831	
All executive officers and directors as a group (6 persons)(12)	7,106,152	3.59

\* Less than one percent

- (1) This table is based upon information supplied by officers, directors and principal shareholders and Forms 3, Forms 4 and Schedules 13D and 13G filed with the Securities and Exchange Commission ( SEC ). Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that each of the shareholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned. Applicable percentages are based on 198,114,301 shares of common stock outstanding on July 29, 2011. Unless otherwise indicated, the address of each person on this table is c/o Aradigm Corporation, 3929 Point Eden Way, Hayward, California, 94545.
- (2) Based upon information contained in a Schedule 13G filed with the SEC on September 22, 2010 and in a Form 4 filed with the SEC on July 11, 2011. First Eagle Investment Management ( FEIM ) (formerly Arnhold and S. Bleichroeder Advisors, LLC), an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is deemed to be the beneficial owner of 72,337,652 shares or 36.51% of the Common Stock believed to be outstanding, as a result of acting as investment advisor to various clients. Clients of FEIM have the right to



receive and the ultimate power to direct the receipt of dividends from, or the proceeds of the sale of, such securities. First Eagle Value in Biotechnology Master Fund, Ltd., a Cayman Islands company for which FEIM acts as investment adviser, may be deemed to beneficially own 36,588,965 of these 72,337,652 shares. In addition, 21 April Fund Ltd., a Cayman Islands company for which FEIM acts as an investment adviser, may be deemed to beneficially own 19,177,029 of these 72,337,652 shares. DEF Associates N.V., a Netherlands Antilles company for which FEIM acts as an investment adviser, may be deemed to beneficially own 7,473,328 of these 72,337,652 shares. 21 April Fund, L.P., a Delaware limited partnership for which FEIM acts as an investment adviser, may be deemed to beneficially own 5,619,787 of these 72,337,652 shares. DEF Associates LP may be deemed to beneficially own 2,498,800 of these 72,337,652 shares.

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- (3) Based upon information contained in a Form 4, filed with the SEC on November 09, 2010.
- (4) Based upon information supplied to us by the shareholder on August 15, 2011.
- (5) Based upon information contained in a Schedule 13G, filed with the SEC on February 24, 2011.
- (6) Includes 1,498,500 stock options shares which are exercisable within 60 days of July 29, 2011. The number of shares also includes 500,000 shares pursuant to restricted stock awards that have not vested. Additionally, the number of shares does not include a total of 300,000 shares that vest only upon the occurrence of certain future events pursuant to a restricted stock bonus agreement between Dr. Gonda and Aradigm.
- (7) Includes 443,750 stock options which are exercisable within 60 days of July 29, 2011. The number of shares also includes 300,000 shares pursuant to restricted stock awards that have not vested.
- (8) Includes 476,400 stock options which are exercisable within 60 days of July 29, 2011. The number of shares also includes 98,685 shares pursuant to restricted stock awards that have not vested and 208,333 shares pursuant to restricted stock units that have not vested.
- (9) Includes 410,500 stock options which are exercisable within 60 days of July 29, 2011. The number of shares also includes 118,422 shares pursuant to restricted stock awards that have not vested.
- (10) Includes 395,000 stock options which are exercisable within 60 days of July 29, 2011. The number of shares also includes 203,947 shares pursuant to restricted stock units that have not vested.
- (11) Includes 137,500 stock options which are exercisable within 60 days of July 29, 2011. The number of shares also includes 60,903 shares pursuant to restricted stock awards that have not vested.
- (12) See footnotes (6) through (11) above.

**Equity Compensation Plan Information**

The following table summarizes our equity compensation plan information as of December 31, 2010. Information is included for the equity compensation plans approved by our shareholders. There are no equity compensation plans not approved by our shareholders.

<b>Plan Category</b>	<b>Common Stock to be Issued Upon Exercise of Outstanding Options and Rights (a)</b>	<b>Weighted-Average Exercise Price of Outstanding Options and Rights (b)</b>	<b>Common Stock Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)</b>
Equity compensation plans approved by Aradigm shareholders	6,354,758(1)	\$ 1.32	4,529,288(2)

Equity compensation plans not approved  
by Aradigm shareholders

- (1) Issuable pursuant to our 1996 Equity Incentive Plan, the 1996 Non-Employee Directors Plan and the 2005 Equity Incentive Plan.
- (2) Includes 2,570,010 shares reserved under our Employee Stock Purchase Plan (See Note 9 to our audited financial statements included elsewhere in this prospectus).

**Change in Control**

There were no arrangements, known to us, including any pledge by any person of our securities the operation of which may at a subsequent date result in a change in control of our company.

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**CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

**Review, Approval or Ratification of Transactions with Related Persons**

The Board has adopted, in writing, a policy and procedures for the review of related person transactions. Any related person transaction we propose to enter into must be reported to our Chief Financial Officer and, unless otherwise reviewed and approved by the Board, shall be reviewed and approved by the Audit Committee in accordance with the terms of the policy, prior to effectiveness or consummation of any related person transaction, whenever practicable. The policy defines a related person transaction as any financial transaction, arrangement or relationship (including any indebtedness or guarantee of indebtedness), or any series of similar transactions, arrangements or relationships in which Aradigm (i) was or is to be a participant, (ii) the amount involved exceeds \$120,000 and (iii) a Related Person (as defined therein) had or will have a direct or indirect material interest. In addition, any related person transaction previously approved by the Audit Committee or otherwise already existing that is ongoing in nature shall be reviewed by the Audit Committee annually to ensure that such related person transaction has been conducted in accordance with the previous approval granted by the Audit Committee, if any, and that all required disclosures regarding the related person transaction are made. Transactions involving compensation of executive officers shall be reviewed and approved by the Compensation Committee in the manner specified in the charter of the Compensation Committee. As appropriate for the circumstances, the Audit Committee shall review and consider the Related Person's interest in the related person transaction, the approximate dollar value of the amount involved in the related person transaction, the approximate dollar value of the amount of the Related Person's interest in the transaction without regard to the amount of any profit or loss, whether the transaction was undertaken in the ordinary course of business, whether the transaction with the Related Person is proposed to be, or was, entered into on terms no less favorable to the Company than terms that could have been reached with an unrelated third party, the purpose of, and the potential benefits to us of the transaction and any other information regarding the related person transaction or the Related Person in the context of the proposed transaction that would be material to investors in light of the circumstances of the particular transaction.

**June 2010 Private Placement**

On June 21, 2010, we closed a private placement, which we refer to in this prospectus as the June 2010 private placement, in which we sold 34,702,512 shares of our common stock and warrants to purchase an aggregate of 7,527,214 shares of our common stock to accredited investors under the terms of a securities purchase agreement that we entered into with the investors on June 18, 2010.

The investors who purchased common stock and warrants at the closing of the June 2010 private placement included the following investors for which First Eagle Investment Management, LLC (who, immediately prior to the June 2010 private placement, was then deemed to be the beneficial owner of more than five percent of our common stock) serves as investment adviser: (i) 21 April Fund, L.P., (ii) 21 April Fund, Ltd., (iii) DEF Associates N.V. and (iv) First Eagle Value in Biotechnology Master Fund, Ltd. At the closing of the June 2010 private placement, these investors for which First Eagle Investment Management, LLC serves as investment adviser collectively purchased 19,433,408 shares of our common stock and warrants to purchase an aggregate of 4,215,239 shares of our common stock for an aggregate purchase price of approximately \$2.3 million. After we held our special meeting of shareholders on September 14, 2010 and obtained the requisite shareholder approval on a proposal to amend our amended and restated articles of incorporation to increase the total number of authorized shares of our common stock to cover the shares issuable upon exercise of the warrants, these four investors fully exercised their warrants at an exercise price of \$0.1184 per share and we received an aggregate of approximately \$0.5 million in additional proceeds from the exercise of their warrants. Consistent with our policy and procedures for the review of related person

transactions, the June 2010 private placement was approved by our Board of Directors.

**July 2011 Private Placement**

On July 7, 2011, we closed a private placement, which we refer to in this prospectus as the July 2011 private placement, in which we sold 25,000,000 shares of our common stock to accredited investors under the terms of a securities purchase agreement that we entered into with the investors on July 5, 2011.

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The investors who purchased common stock at the closing of the July 2011 private placement included the following investors for which First Eagle Investment Management, LLC (who, immediately prior to the July 2011 private placement, was then deemed to be the beneficial owner of more than five percent of our common stock) serves as investment adviser: (i) 21 April Fund L.P., (ii) 21 April Fund, Ltd., (iii) DEF Associates N.V., (iv) DEF Associates L.P. and (v) First Eagle Value in Biotechnology Master Fund, Ltd. At the closing of the July 2011 private placement, these investors for which First Eagle Investment Management LLC serves as investment adviser collectively purchased 10,625,000 shares of our common stock for an aggregate purchase price of approximately \$2.0 million. Consistent with our policy and procedures for the review of related person transactions, the July 2011 private placement was approved by our Board of Directors.

**SELLING SHAREHOLDERS**

This prospectus generally covers the resale of up to 68,229,726 shares of our common stock being offered by the selling shareholders identified in the table below. These shares consist of (i) 34,702,512 outstanding shares of common stock issued in the June 2010 private placement, (ii) 7,527,214 outstanding shares of common stock that were issued upon exercise of warrants issued in the June 2010 private placement and (iii) 26,000,000 outstanding shares of common stock that were issued under the Novo Nordisk stock purchase agreement.

We have entered into registration rights agreements with the selling shareholders pursuant to which we have agreed to file a registration statement, of which this prospectus is a part, under the Securities Act of 1933, as amended (the Securities Act ), registering the resale by the selling shareholders of the shares of common stock covered by this prospectus. We have also agreed to cause such registration statement to become effective, and to keep such registration statement effective. Our failure to satisfy the deadlines set forth in the registration rights agreements may subject us to payment of certain monetary penalties pursuant to the terms of the registration rights agreements.

We are registering the shares of common stock covered by this prospectus in order to permit the selling shareholders to offer the shares for resale from time to time.

The table below lists the selling shareholders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder) of the shares of common stock held by each of the selling shareholders. The table below has been prepared based on information supplied to us by the selling shareholders. Except as indicated in the footnotes to the table below, the selling shareholders have not had any material relationship with us within the past three years, except for their ownership of our common stock.

The second column lists the number of shares of common stock beneficially owned by the selling shareholders, based on their respective ownership of shares of common stock, as of September 28, 2010. This column includes the shares of common stock being offered under this prospectus.

The third column lists the maximum number of shares of common stock being offered by the selling shareholders under this prospectus.

The fourth and fifth columns assume the sale of all of the shares offered by the selling shareholders pursuant to this prospectus.

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The selling shareholders may sell all, some or none of their shares in this offering. See Plan of Distribution.

<b>Name of Selling Shareholder</b>	<b>Number of Shares of Common Stock Owned Prior to Offering(a)</b>	<b>Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus</b>	<b>Number of Shares of Common Stock Owned After Offering(b)</b>	<b>Percentage of Common Stock Outstanding After Offering(c)</b>
21 April Fund, L.P. (1)	5,619,787	1,858,108(2)	3,761,679	1.90%
21 April Fund, Ltd. (3)	19,177,029	6,587,837(4)	12,589,192	6.35%
Bison Trading, LLC(5)	1,689,189	1,689,189(6)	0	*
DEF Associates N.V. (7)	7,473,328	3,378,378(8)	4,094,950	2.07%
First Eagle Value in Biotechnology Master Fund, Ltd. (9)	36,588,965	11,824,324(10)	24,764,641	12.50%
Laurence Lytton(11)	8,864,608	8,445,945(12)	418,663	*
Novo Nordisk A/S(13)	26,204,122	26,000,000(14)	204,122	*
The Conus Fund, L.P.(15)	4,216,920	3,130,500(16)	1,086,420	*
The Conus Fund Offshore Master Fund Limited(17)	843,700	624,700(18)	219,000	*
The Conus Fund (QP), L.P.(19)	4,931,368	4,690,745(20)	240,623	*

The selling shareholder is an affiliate of a broker-dealer. Based on information provided to us by such selling shareholder, such selling shareholder purchased the shares being offered for resale in the ordinary course of business and, at the time of purchase, such selling shareholder had no agreements or understandings, directly or indirectly, with any person to distribute the shares.

\* Less than 1%

- (a) Includes the shares of common stock being offered under this prospectus. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that each of the selling shareholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned.
- (b) Assumes all of the shares of common stock being offered under this prospectus are sold in the offering.
- (c) Applicable percentage ownership is based on 198,114,301 shares of common stock outstanding as of July 30, 2011.
- (1) First Eagle Investment Management, LLC, a Delaware limited liability company and a U.S. registered investment adviser serves as investment adviser to the selling shareholder. First Eagle Investment Management, LLC is a subsidiary of Arnhold and S. Bleichroeder Holdings, Inc., a Delaware corporation. Michael M. Kellen may be deemed to have voting and investment control over the shares held by the selling shareholder.

- (2) Consists of 1,526,911 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 331,197 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (3) First Eagle Investment Management, LLC, a Delaware limited liability company and a U.S. registered investment adviser serves as investment adviser to the selling shareholder. First Eagle Investment Management, LLC is a subsidiary of Arnhold and S. Bleichroeder Holdings, Inc., a Delaware corporation. Michael M. Kellen may be deemed to have voting and investment control over the shares held by the selling shareholder.
- (4) Consists of 5,413,592 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 1,174,245 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (5) Chad C. Hellmann is the managing member of the selling shareholder and may be deemed to have voting and investment control over the shares held by the selling shareholder.



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- (6) Consists of 1,388,100 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 301,089 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (7) First Eagle Investment Management, LLC, a Delaware limited liability company and a U.S. registered investment adviser serves as investment adviser to the selling shareholder. First Eagle Investment Management, LLC is a subsidiary of Arnhold and S. Bleichroeder Holdings, Inc., a Delaware corporation. Michael M. Kellen may be deemed to have voting and investment control over the shares held by the selling shareholder.
- (8) Consists of 2,776,201 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 602,177 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (9) First Eagle Investment Management, LLC, a Delaware limited liability company and a U.S. registered investment adviser serves as investment adviser to the selling shareholder. First Eagle Investment Management, LLC is a subsidiary of Arnhold and S. Bleichroeder Holdings, Inc., a Delaware corporation. Dan DeClue may be deemed to have voting and investment control over the shares held by the selling shareholder.
- (10) Consists of 9,716,704 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 2,107,620 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (11) Based upon information contained in a Schedule 13G filed with the SEC on February 24, 2011, Laurence Lytton beneficially owns 8,864,608 shares of common stock prior to the offering.
- (12) Consists of 6,940,502 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 1,505,443 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (13) Novo Nordisk A/S, a company organized under the laws of Denmark, is the selling shareholder. Novo Nordisk is a former collaboration partner of ours, and the former lender under the promissory note and security agreement dated July 3, 2006 that was terminated at the closing of the transactions contemplated by the Novo Nordisk stock purchase agreement. The board of directors of Novo Nordisk A/S exercises the sole voting and/or dispositive powers with respect to the shares being offered by Novo Nordisk A/S under this prospectus. The members of the board of directors of Novo Nordisk A/S are Sten Scheibye, Göran A. Ando, Henrik Gürtler, Ulrik Hjulmand-Lassen, Pamela J. Kirby, Anne Marie Handrup Kverneland, Kurt Anker Nielsen, Søren Thuesen Pedersen, Stig Strøbaek, Hannu Ryöppönen and Jørgen Wedel. Based upon information contained in a Form 4 filed with the SEC on November 9, 2010, Novo Nordisk A/S directly holds all 26,204,122 shares of common stock owned prior to the offering.
- (14) Consists of 26,000,000 shares that were issued to Novo Nordisk A/S under the Novo Nordisk stock purchase agreement.
- (15) Conus Capital, LLC, a New York limited liability company, serves as the selling shareholder's general partner (the "General Partner"). Andrew Zacks is the managing member of the General Partner. Conus Partners Inc., a New York corporation (the "Investment Adviser"), provides infrastructure and overhead support services to the selling shareholder and is responsible for managing the investment portfolio of the selling shareholder and may be deemed to have voting and investment control over the shares held by the selling shareholder. Andrew Zacks

is the principal and managing director of the Investment Adviser.

- (16) Consists of 2,572,506 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 557,994 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (17) The investment adviser of the selling shareholder is Conus Partners, Inc. (the Investment Adviser ), a corporation organized under the laws of the State of New York, U.S.A., which may be deemed to have voting and investment control over the shares held by the selling shareholder. Andrew Zacks is the principal and managing director of the Investment Adviser.

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- (18) Consists of 513,351 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 111,349 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.
- (19) Conus Capital, LLC, a New York limited liability company, serves as the selling shareholder's general partner (the General Partner). Andrew Zacks is the managing member of the General Partner. Conus Partners Inc., a New York corporation (the Investment Adviser), provides infrastructure and overhead support services to the selling shareholder and is responsible for managing the investment portfolio of the selling shareholder and may be deemed to have voting and investment control over the shares held by the selling shareholder. Andrew Zacks is the principal and managing director of the Investment Adviser.
- (20) Consists of 3,854,645 outstanding shares of common stock that were issued to the selling shareholder in the June 2010 private placement and 836,100 outstanding shares of common stock that were issued upon exercise of warrants issued to the selling shareholder in the June 2010 private placement.

**DETERMINATION OF OFFERING PRICE**

The selling shareholders will determine at what price they may sell the shares of common stock offered by this prospectus, and such sales may be made at prevailing market prices, or at privately negotiated prices.

**PLAN OF DISTRIBUTION**

We are registering 68,229,726 shares of our common stock being offered by the selling shareholders. These shares consist of (i) 34,702,512 outstanding shares of common stock issued in the June 2010 private placement, (ii) 7,527,214 outstanding shares of common stock that were issued upon exercise of warrants issued in the June 2010 private placement and (iii) 26,000,000 outstanding shares of common stock that were issued under the Novo Nordisk stock purchase agreement. We are registering these shares to permit the resale of these shares of common stock by the selling shareholders from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling shareholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling shareholders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling shareholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;

in the over-the-counter market;

in transactions otherwise than on these exchanges or systems or in the over-the-counter market;

through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

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short sales made after the date the Registration Statement is declared effective by the SEC;

agreements between broker-dealers and the selling securityholders to sell a specified number of such shares at a stipulated price per share;

a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

The selling shareholders may also sell shares of common stock under Rule 144 promulgated under the Securities Act of 1933, as amended, if available, rather than under this prospectus. In addition, the selling shareholders may transfer the shares of common stock by other means not described in this prospectus. If the selling shareholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling shareholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling shareholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling shareholders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling shareholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The selling shareholders may pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling shareholders to include the pledgee, transferee or other successors in interest as selling shareholders under this prospectus. The selling shareholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling shareholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be underwriters within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling shareholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states, the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling shareholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling shareholders and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended (the Exchange Act ), and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling shareholders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the

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shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the related registration rights agreements, estimated to be \$48,586.75 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or blue sky laws; provided, however, a selling shareholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling shareholders against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the selling shareholders will be entitled to contribution. We may be indemnified by the selling shareholders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling shareholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

## **DESCRIPTION OF SECURITIES**

The following description summarizes some of the terms of our capital stock. Because it is only a summary, it does not contain all of the information that may be important to you and is qualified in its entirety by reference to the relevant provisions of our Amended and Restated Articles of Incorporation, our Amended and Restated Bylaws and our amended and restated shareholder rights plan.

For a complete description you should refer to our Amended and Restated Articles of Incorporation, our Amended and Restated Bylaws and our amended and restated shareholder rights plan, which are incorporated by reference as exhibits to the registration statement of which the prospectus is a part.

### **General**

As of the date of this prospectus, we are authorized by our amended and restated articles of incorporation to issue an aggregate of 213,527,214 shares of common stock. In addition, as of the date of this prospectus, we are authorized by our amended and restated articles of incorporation to issue an aggregate of 5,000,000 shares of preferred stock.

As of July 30, 2011, there were:

198,114,301 shares of common stock issued and outstanding, which includes the shares of common stock being offered under this prospectus; and

no shares of preferred stock issued and outstanding.

### **Common Stock**

All outstanding shares of common stock are of the same class and have equal rights and attributes. The holders of common stock are entitled to one vote per share on all matters submitted to a vote of shareholders of the Company. All shareholders are entitled to share equally in dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available. In the event of liquidation, the holders of common stock are entitled to share ratably in all assets remaining after payment of all liabilities. The shareholders do not have cumulative or preemptive rights.

The transfer agent and registrar for our common stock is Computershare (formerly Equiserve Trust Company).

**Preferred Stock**

Our Board of Directors is empowered, without shareholder approval, to issue preferred stock with dividend, liquidation, conversion, voting or other rights which could adversely affect the voting power or other rights of the holders of common stock. We may issue some or all of the preferred stock to effect a business combination. In addition, the preferred stock could be utilized as a method of discouraging, delaying or preventing a change in



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control of us. Although we do not currently intend to issue any shares of preferred stock, we cannot assure you that we will not do so in the future.

**Shareholder Rights Plan**

In September 2008, we adopted an amended and restated shareholder rights plan, which replaced the rights plan originally adopted in August 1998. Pursuant to the rights plan, as amended and restated, we distribute rights to purchase shares of Series A Junior Participating Preferred Stock as a dividend at the rate of one right for each share of common stock outstanding. Until the rights are distributed, the rights trade with, and are not separable from our common stock and are not exercisable. The rights are designed to guard against partial tender offers and other abusive and coercive tactics that might be used in an attempt to gain control of our company or to deprive our shareholders of their interest in our company's long-term value. The shareholder rights plan seeks to achieve these goals by encouraging a potential acquirer to negotiate with our board of directors. The rights will expire at the close of business on September 8, 2018.

**MARKET FOR COMMON EQUITY AND RELATED SHAREHOLDER MATTERS**

Since December 21, 2006, our common stock has been quoted on the OTC Bulletin Board, an electronic quotation service for securities traded over-the-counter, under the symbol ARDM. Between June 20, 1996 and May 1, 2006 our common stock was listed on the Nasdaq Global Market (formerly the Nasdaq National Market). Between May 2, 2006 and November 9, 2006, our common stock was listed on the Nasdaq Capital Market (formerly the Nasdaq Small Cap Market). As of November 9, 2006, we were delisted from the Nasdaq Capital Market. Between November 10, 2006 and December 20, 2006, our common stock was quoted on the Pink Sheets.

The following table sets forth the high and low closing sale prices of our common stock for the periods indicated as reported on the OTC Bulletin Board.

	<b>High</b>	<b>Low</b>
<b>2009</b>		
First Quarter	\$ 0.29	\$ 0.07
Second Quarter	0.34	0.10
Third Quarter	0.28	0.17
Fourth Quarter	0.20	0.14
<b>2010</b>		
First Quarter	\$ 0.18	\$ 0.13
Second Quarter	0.15	0.11
Third Quarter	0.20	0.11
Fourth Quarter	0.29	0.13
<b>2011</b>		
First Quarter	\$ 0.25	\$ 0.16
Second Quarter	0.22	0.15
Third Quarter (through August 3, 2011)	0.20	0.18

As of July 30, 2011, there were 160 holders of record of our common stock. A greater number of holders of common stock are street name or beneficial holders, whose shares are held of record by banks, brokers and other financial institutions.

**Dividend Policy**

We have never declared or paid any cash dividends on our capital stock and we do not currently intend to pay any cash dividends on our capital stock for at least the foreseeable future. We expect to retain future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends on our capital stock will be, subject to applicable law, at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements and contractual restrictions in loan agreements or other agreements.

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**LEGAL MATTERS**

The validity of the shares of our common stock offered hereby has been passed upon for us by Morrison & Foerster LLP, San Francisco, California.

**EXPERTS**

The audited financial statements for the years ended December 31, 2010 and 2009 have been included in this prospectus in reliance upon the report of Odenberg Ullakko Muranishi & Co LLP, an independent registered public accounting firm, and their authority as experts in accounting and auditing.

**WHERE YOU CAN FIND MORE INFORMATION**

We are a public company and file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street, NE, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. Our SEC filings are also available, at no charge, to the public at the SEC's website at <http://www.sec.gov>. We have filed with the SEC a Registration Statement on Form S-1 under the Securities Act with respect to the shares of common stock being offered by this prospectus. This prospectus is part of that registration statement. This prospectus does not contain all of the information set forth in the registration statement or the exhibits to the registration statement. For further information with respect to us and the shares we are offering pursuant to this prospectus, you should refer to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete, and you should refer to the copy of that contract or other documents filed as an exhibit to the registration statement. You may read or obtain a copy of the registration statement at the SEC's public reference facilities and Internet site referred to above.

**ARADIGM CORPORATION**

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**ARADIGM CORPORATION**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**

	<b>June 30, 2011 (Unaudited)</b>	<b>December 31, 2010 (Note 1)</b>
	<b>(In thousands, except share data)</b>	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 8,481	\$ 5,295
Short-term investments	899	251
Receivables	97	180
Prepaid and other current assets	480	180
Total current assets	9,957	5,906
Property and equipment, net	1,319	1,553
Notes receivable	56	54
Other assets	583	115
Total assets	\$ 11,915	\$ 7,628
<b>LIABILITIES AND SHAREHOLDERS EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 212	\$ 257
Accrued clinical and cost of other studies	921	993
Accrued compensation	716	327
Facility lease exit obligation	108	99
Other accrued liabilities	778	450
Total current liabilities	2,735	2,126
Deferred rent	121	99
Facility lease exit obligation, non-current	677	729
Other non-current liabilities	75	75
Note payable, net of discount and accrued interest	8,145	
Total liabilities	11,753	3,029
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, 5,000,000 shares authorized, none outstanding		
Common stock, no par value; authorized shares: 213,527,214 at June 30, 2011 and December 31, 2010; issued and outstanding shares: 173,114,301 at June 30, 2011; 172,304,235 at December 31, 2010	359,328	358,424
Accumulated deficit	(359,166)	(353,825)

Total shareholders' equity	162	4,599
Total liabilities and shareholders' equity	\$ 11,915	\$ 7,628

See accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

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**ARADIGM CORPORATION**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**

	<b>Three Months Ended</b>		<b>Six Months Ended</b>	
	<b>June 30,</b>		<b>June 30,</b>	
	<b>2011</b>	<b>2010</b>	<b>2011</b>	<b>2010</b>
	<b>(In thousands, except per share data)</b>			
	<b>(Unaudited)</b>			
Revenue:				
Royalty revenue	184		366	4,000
Operating expenses:				
Research and development	1,584	2,736	3,064	5,573
General and administrative	1,440	1,382	2,575	2,635
Restructuring and asset impairment	10	13	20	26
Total operating expenses	3,034	4,131	5,659	8,234
Loss from operations	(2,850)	(4,131)	(5,293)	(4,234)
Interest income	1	4	3	14
Interest expense	(46)	(109)	(53)	(218)
Other income (expense), net	1	108	2	106
Net loss	\$ (2,894)	\$ (4,128)	\$ (5,341)	\$ (4,332)
Basic and diluted net loss per common share	\$ (0.02)	\$ (0.04)	\$ (0.03)	\$ (0.04)
Shares used in computing basic and diluted net loss per common share	170,731	104,891	170,435	102,396

See accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

**Table of Contents****ARADIGM CORPORATION****CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Six Months Ended June 30,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(In thousands) (Unaudited)</b>	
<b>Cash flows from operating activities:</b>		
Net loss	\$ (5,341)	\$ (4,332)
Adjustments to reconcile net loss to cash used in operating activities:		
Amortization and accretion of investments	1	26
Depreciation and amortization	240	322
Stock-based compensation expense	378	451
Compensation expense from warrants for services rendered	428	
Changes in operating assets and liabilities:		
Receivables	83	(239)
Prepaid and other current assets	(262)	(171)
Other assets	(470)	3
Accounts payable	(46)	376
Accrued compensation	389	311
Other liabilities	290	138
Deferred rent	22	(13)
Facility lease exit obligation	(43)	(124)
Net cash used in operating activities	(4,331)	(3,252)
<b>Cash flows from investing activities:</b>		
Capital expenditures	(5)	(5)
Purchases of short-term investments	(1,149)	
Proceeds from sales and maturities of short-term investments	500	5,200
Net cash provided by (used in) investing activities	(654)	5,195
<b>Cash flows from financing activities:</b>		
Proceeds from private placement of common stock, net		3,719
Proceeds from issuance of common stock	60	43
Proceeds from issuance of note payable	8,111	
Net cash provided by financing activities	8,171	3,762
Net increase in cash and cash equivalents	3,186	5,705
Cash and cash equivalents at beginning of period	5,295	3,903
Cash and cash equivalents at end of period	\$ 8,481	\$ 9,608



See accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

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**ARADIGM CORPORATION**

**NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**

**June 30, 2011**

**1. Organization, Basis of Presentation and Liquidity**

***Organization***

Aradigm Corporation (the Company, we, our, or us) is a California corporation, incorporated in 1991, focused on the development and commercialization of drugs delivered by inhalation for the treatment of severe respiratory diseases. The Company's principal activities to date have included conducting research and development and developing collaborations. Management does not anticipate receiving any revenues from the sale of products in the upcoming year, except for royalty revenue from Zogenix. The Company operates as a single operating segment.

***Basis of Presentation***

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Certain information and footnote disclosures normally included in financial statements prepared in accordance with United States generally accepted accounting principles have been condensed or omitted pursuant to the rules and regulations of the Securities and Exchange Commission (the SEC). In the opinion of management, the financial statements reflect all adjustments, which are of a normal recurring nature, necessary for fair presentation. The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2010, as filed with the SEC on March 25, 2011 (the 2010 Annual Report on Form 10-K). The results of the Company's operations for the interim periods presented are not necessarily indicative of operating results for the full fiscal year or any future interim period.

The balance sheet at December 31, 2010 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by United States generally accepted accounting principles for complete financial statements. For further information, please refer to the financial statements and notes thereto included in the 2010 Annual Report on Form 10-K.

The accompanying unaudited condensed consolidated financial statements include the accounts of Aradigm Corporation and the Company's active wholly-owned subsidiary, Aradigm Royalty Financing LLC. All intercompany transactions have been eliminated.

***Liquidity***

The Company had cash, cash equivalents and short-term investments of approximately \$9.4 million as of June 30, 2011. Management believes that this amount, as well as the proceeds from the July 2011 private placement (see Note 12), will be sufficient to fund operations through at least the second quarter of 2012.

**2. Summary of Significant Accounting Policies**

***Use of Estimates***

The preparation of financial statements, in conformity with United States generally accepted accounting principles, requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. These estimates include useful lives for property and equipment and related depreciation calculations, estimated amortization period for expenses associated with the June 2011 royalty financing transaction and for payments received from product development and license agreements as they relate to revenue recognition, assumptions for valuing options and warrants, and income taxes. Actual results could differ materially from these estimates.

**Table of Contents****ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Cash and Cash Equivalents***

All highly liquid investments with maturities of three months or less at the time of purchase are classified as cash equivalents.

***Investments***

Management determines the appropriate classification of the Company's investments, which consist solely of debt securities, at the time of purchase. All investments are classified as available-for-sale, carried at estimated fair value and reported in cash and cash equivalents or short-term investments. Unrealized gains and losses on available-for-sale securities are excluded from earnings and losses and are reported as a separate component in the statement of shareholders' equity until realized. Fair values of investments are based on quoted market prices where available. Investment income is recognized when earned and includes interest, dividends, amortization of purchase premiums and discounts, and realized gains and losses on sales of securities. The cost of securities sold is based on the specific identification method. The Company regularly reviews all of its investments for other-than-temporary declines in fair value. When the Company determines that the decline in fair value of an investment below the Company's accounting basis is other-than-temporary, the Company reduces the carrying value of the securities held and records a loss equal to the amount of any such decline. No such reductions were required during any of the periods presented.

***Property and Equipment***

The Company records property and equipment at cost and calculates depreciation using the straight-line method over the estimated useful lives of the respective assets. Machinery and equipment includes external costs incurred for validation of the equipment. The Company does not capitalize internal validation expense. Computer equipment and software includes capitalized computer software. All of the Company's capitalized software is purchased; the Company has not internally developed computer software. Leasehold improvements are depreciated over the shorter of the term of the lease or useful life of the improvement.

***Impairment of Long-Lived Assets***

In accordance with Accounting Standards Codification (ASC) 360-10, *Property, Plant, and Equipment - Overall*, the Company reviews for impairment whenever events or changes in circumstances indicate that the carrying amount of property and equipment may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written down to their estimated fair values and the loss is recognized in the statements of operations.

***Accounting for Costs Associated with Exit or Disposal Activities***

In accordance with ASC 420, *Exit or Disposal Cost Obligations* (ASC 420), the Company recognizes a liability for the cost associated with an exit or disposal activity that is measured initially at its fair value in the period in which the liability is incurred. The Company accounted for the partial sublease of its headquarters building as an exit activity and recorded the sublease loss in its statement of operations (see Note 5).

According to ASC 420, costs to terminate an operating lease or other contracts are (a) costs to terminate the contract before the end of its term or (b) costs that will continue to be incurred under the contract for its remaining term without economic benefit to the entity. In periods subsequent to initial measurement, changes to the liability are measured using the credit-adjusted risk-free rate that was used to measure the liability initially.

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**ARADIGM CORPORATION**

**NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Revenue Recognition***

The Company recognizes revenue under the provisions of the Securities and Exchange Commission issued Staff Accounting Bulletin 104, Topic 13, *Revenue Recognition Revised and Updated* ( SAB Topic 13 ) and ASC 605-25, *Revenue Recognition Multiple Elements* ( ASC 605-25 ). Revenue for arrangements not having multiple deliverables, as outlined in ASC 605-25, is recognized once costs are incurred and collectability is reasonably assured.

In accordance with contract terms, milestone payments from collaborative research agreements are considered reimbursements for costs incurred under the agreements and, accordingly, are recognized as revenue either upon completion of the milestone effort, when payments are contingent upon completion of the effort, or are based on actual efforts expended over the remaining term of the agreement when payments precede the required efforts. Refundable development payments are deferred until specific performance criteria are achieved. Refundable development payments are generally not refundable once specific performance criteria are achieved and accepted.

Collaborative license and development agreements that require the Company to provide multiple deliverables, such as a license, research and product steering committee services and other performance obligations, are accounted for in accordance with ASC 605-25. Under ASC 605-25, delivered items are evaluated to determine whether such items have value to the Company's collaborators on a stand-alone basis and whether objective reliable evidence of fair value of the undelivered items exists. Deliverables that meet these criteria are considered a separate unit of accounting. Deliverables that do not meet these criteria are combined and accounted for as a single unit of accounting. The appropriate revenue recognition criteria are identified and applied to each separate unit of accounting.

Royalty revenue will be earned under the terms of the asset sale agreement with Zogenix. The Company will recognize revenue when the amounts under this agreement can be determined and when collectability is probable. The Company has no performance obligations under this agreement. The Company anticipates recognizing revenue from quarterly royalty payments one quarter in arrears since it believes it will not be able to determine quarterly royalty earnings until it receives the royalty statements from Zogenix.

***Research and Development***

Research and development expenses consist of costs incurred for company-sponsored, collaborative and contracted research and development activities. These costs include direct and research-related overhead expenses. The Company expenses research and development costs as such costs are incurred.

***Stock-Based Compensation***

The Company accounts for share-based payment arrangements in accordance with ASC 718, *Compensation-Stock Compensation* and ASC 505-50, *Equity-Equity Based Payments to Non-Employees* which requires the recognition of compensation expense, using a fair-value based method, for all costs related to share-based payments including stock options and restricted stock awards and stock issued under the Company's employee stock purchase plan. This guidance requires companies to estimate the fair value of share-based payment awards on the date of the grant using an option-pricing model. The Company has adopted the simplified method to calculate the beginning balance of the additional paid-in capital, or APIC pool of excess tax benefits, and to determine the subsequent effect on the APIC pool and statement of cash flows of the tax effects of stock-based compensation awards.

*Income Taxes*

The Company makes certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes. As part of the process of preparing the financial statements, the Company is required to estimate income

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**Table of Contents****ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

taxes in each of the jurisdictions in which it operates. This process involves the Company estimating its current tax exposure under the most recent tax laws and assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in the balance sheets.

The Company assesses the likelihood that it will be able to recover its deferred tax assets. It considers all available evidence, both positive and negative, including the historical levels of income and losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. If the Company does not consider it more likely than not that it will recover its deferred tax assets, the Company records a valuation allowance against the deferred tax assets that it estimates will not ultimately be recoverable. At June 30, 2011 and December 31, 2010, the Company believed that the amount of its deferred income taxes would not be ultimately recovered. Accordingly, the Company recorded a full valuation allowance for deferred tax assets. However, should there be a change in the Company's ability to recover its deferred tax assets, the Company would recognize a benefit to its tax provision in the period in which it determines that it is more likely than not that it will recover its deferred tax assets.

***Net Loss Per Common Share***

Basic net loss per common share is computed using the weighted-average number of shares of common stock outstanding during the period less the weighted-average number of restricted shares of common stock subject to repurchase. Potentially dilutive securities were not included in the net loss per common share calculation for the three and six months ended June 30, 2011 and 2010, because the inclusion of such shares would have had an anti-dilutive effect.

***Recently Issued Accounting Pronouncements***

In April 2010, the Financial Accounting Standards Board ( FASB ) issued Accounting Standards Update ( ASU ) 2010-17, *Milestone Method of Revenue Recognition a consensus of the FASB Emerging Issues Task Force*. This standard provides guidance on defining a milestone and determining when it may be appropriate to apply the milestone method for revenue recognition for research and development arrangements. This standard provides guidance on the criteria that should be met to recognize revenue upon achievement of the related milestone event. The ASU is effective for fiscal years (and interim periods within those fiscal years) beginning on or after June 15, 2010. The Company adopted this guidance in the third quarter of 2010. While the Company does not expect the adoption of this standard to have a material impact on the Company's financial position and results of operations, this standard may impact the Company in the event the Company completes future transactions.

In September 2009, the FASB issued ASU 2009-13 *Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements* (formerly EITF Issue No. 08-1 *Revenue Arrangements with Multiple Deliverables* ). This standard modifies the revenue recognition guidance for arrangements that involve the delivery of multiple elements, such as product, license fees and research and development reimbursements, to a customer at different times as part of a single revenue generating transaction. This standard provides principles and application guidance to determine whether multiple deliverables exist, how the individual deliverables should be separated and how to allocate the revenue in the arrangement among those separate deliverables. The standard also significantly expands the disclosure requirements for multiple deliverable revenue arrangements. While the Company does not expect the adoption of this standard to have a material impact on the Company's financial position and results of operations, this standard may impact the



Company in the event the Company completes future transactions.

In June 2011, the Financial Accounting Standards Board issued ASU 2011-05, Comprehensive Income (Topic 220): *Presentation of Comprehensive Income*. ASU 2011-05 eliminates the option to present components of other comprehensive income as part of the statement of changes in stockholder's equity and instead requires separate statements of comprehensive income. The amendment is effective for the fiscal years, and interim periods

**Table of Contents****ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

within those years, beginning after December 15, 2011. We do not expect the adoption of ASU 2011-05 to have a material impact on our financial position and results of operation.

**3. Cash, Cash Equivalents and Short-Term Investments**

At June 30, 2011 and December 31, 2010, the amortized cost of the Company's cash, cash equivalents and short-term investments approximated their fair values. The Company considers all liquid investments purchased with a maturity of three months or less to be cash equivalents. All short-term investments at June 30, 2011 mature in less than one year.

The Company invests its cash and cash equivalents and short-term investments in money market funds, commercial paper and corporate and government notes. All of these securities are classified as available-for-sale with the unrealized gain and loss being recorded in accumulated other comprehensive income; there were no unrealized gains or losses at June 30, 2011 and December 31, 2010.

**4. Fair Value Measurements**

Effective January 1, 2008, the Company adopted SFAS 157, *Fair Value Measurements*, (now referred to as ASC 820) which clarifies the definition of fair value, prescribes methods for measuring fair value, establishes a fair value hierarchy based on the inputs used to measure fair value and expands disclosures about the use of fair value measurements. The fair value hierarchy has three levels based on the reliability of the inputs used to determine fair value. Level 1 values are based on quoted prices in active markets. Level 2 values are based on significant other observable inputs. Level 3 values are based on significant unobservable inputs. The following table presents the fair value level for the assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy. The Company does not have any liabilities that are measured at fair value.

Description	Balance June 30, 2011	Fair Value Measurements (in thousands)		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	\$ 8,481	\$ 8,481	\$	\$
Short-term investments:				
Commercial paper	\$ 399	\$	\$ 399	\$
U.S. treasury and agencies	500		500	
Total	\$ 899	\$	\$ 899	\$

The Company's cash and cash equivalents at June 30, 2011 consist of cash and money market funds. Money market funds are valued using quoted market prices. The Company's short-term investments at June 30, 2011 consisted of commercial paper and U.S. agency notes. The Company uses an independent third party pricing service to value its commercial paper and other Level 2 investments. The pricing service uses observable inputs such as new issue money market rates, adjustment spreads, corporate actions and other factors and applies a series of matrices pricing model. The Company performs a review of prices reported by the pricing service to determine if they are reasonable estimates of fair value. In addition, the Company performs a review of its securities to determine the proper classification in accordance with the fair value hierarchy.

#### **5. Sublease Agreement and Lease Exit Liability**

On July 18, 2007, the Company entered into a sublease agreement with Mendel Biotechnology, Inc. ( Mendel ), under which the Company subleases to Mendel approximately 48,000 square feet of the

**Table of Contents****ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

72,000 square foot facility located at 3929 Point Eden Way, Hayward, CA. The Company recorded a \$2.1 million impairment expense related to the sublease for the year ended December, 31, 2007.

The Company recorded this expense and the related lease exit liability because the monthly payments the Company expects to receive under the sublease are less than the amounts that the Company will owe the lessor for the sublease space. The fair value of the lease exit liability was determined using a credit-adjusted risk-free rate to discount the estimated future net cash flows, consisting of the minimum lease payments to the lessor for the sublease space and payments the Company will receive under the sublease. The sublease loss and ongoing accretion expense required to record the lease exit liability at its fair value using the interest method have been recorded as part of restructuring and asset impairment expense in the statement of operations.

The lease exit liability activity for the six months ended June 30, 2011 is as follows (in thousands):

	<b>Six Months Ended June 30, 2011</b>	
Balance at January 1, 2011	\$	828
Accretion expense		20
Lease payments		(63)
Balance at June 30, 2011	\$	785

As of June 30, 2011, \$108,000 of the \$785,000 balance was recorded as a current liability and \$677,000 was recorded as a non-current liability.

**6. Other Accrued Liabilities**

Other accrued liabilities consist of accrued rent and accrued expenses for legal services, audit-related services and payroll withholding liabilities.

At June 30, 2011, other accrued liabilities consisted of accrued rent of \$410,000, accrued expenses for services of \$335,000 and payroll withholding liabilities of \$33,000. At December 31, 2010, other accrued liabilities consisted of accrued rent of \$235,000, accrued expenses for services of \$178,000 and payroll withholding liabilities of \$37,000. In July 2010, the Company entered into an agreement with the landlord of the Hayward facility to defer a portion of the monthly rent payment over a one year period. The repayment period was over 12 months beginning in September 2011, if not repaid sooner without pre-payment penalty. Deferred amounts accrue interest at 10% per annum.

**7. Collaborations and Royalty Agreements*****Zogenix***

In August 2006, the Company sold all of its assets related to the Intraject needle-free injector technology platform and products, including 12 United States patents along with foreign counterparts, to Zogenix, Inc., a privately-held

pharmaceutical company. Zogenix is responsible for further development and commercialization efforts of Intraject (now rebranded under the name DosePro\*). On January 13, 2010, Zogenix announced the U.S. commercial launch of its SUMAVEL\* DosePro product. Under the terms of the asset sale agreement, the Company is entitled to receive quarterly royalty payments from Zogenix in the amount of 3% of net sales of DosePro products. Revenue will be recognized from the quarterly royalty payments one quarter in arrears due to the contractual sixty day lag in royalty reporting under the asset sale agreement. The Company recorded recurring royalty revenue of \$184,000 for the quarter ended June 30, 2011.

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**Table of Contents****ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)****8. Note Payable and Accrued Interest**

On June 21, 2011, the Company entered into an \$8.5 million royalty financing agreement with a syndicate of lenders. The agreement created a debt obligation (the Term Loan) that will be repaid through and secured by royalties from net sales of the SUMAVEL DosePro (sumatriptan injection) needle-free delivery system payable to the Company under its Asset Purchase Agreement (APA) with Zogenix.

Under the terms of the royalty financing agreement, the Company received a loan of \$8.5 million, less fees, transaction and legal expenses (estimated to be approximately \$473,000) and an additional \$250,000 set aside for an Interest Reserve Account. The lenders will be entitled to receive 100% of all royalties payable to the Company under the APA until the principal and accrued interest of the Term Loan are fully repaid, after which time the benefit of any further royalties made under the APA will accrue to Aradigm. The Term Loan will accrue interest at the rate equal to the greater of a) LIBOR or b) one-and-a-half percent (1.50%), plus a margin of fourteen-and-a-half percent (14.5%). To the extent royalty payments are insufficient to pay accrued and unpaid interest under the financing, the shortfall will be funded from the Interest Reserve Account or, if the account is insufficient to pay all of the interest due, the shortfall will be capitalized and added to the principal balance of the Term Loan. The lenders were granted a security interest in the assets of an Aradigm subsidiary, Aradigm Royalty Financing LLC, which holds Aradigm's rights to receive royalty payments under the APA. The lenders have no recourse to other assets of Aradigm for repayment of the loan. Amortization of the Term Loan will occur to the extent that royalties payments received for any quarter exceed accrued interest due for that quarter.

The Company has the right to prepay the Term Loan after June 21, 2012, subject to the payment of the principal balance plus a prepayment fee of eight percent (8%) of the outstanding balance if prepaid in months 13-24 following the transaction closing date of June 21, 2011; four percent (4%) if prepaid in months 25-36; and two percent (2%) if prepaid in months 37-48. There will be no prepayment fee for repaying the Term Loan after the forty-eight (48) month anniversary of the closing date. In addition, the Company has the right to make partial prepayments in an amount no less than the greater of (i) ten percent (10%) of the principal balance of the Term Loan outstanding as of the applicable prepayment date or (ii) \$1,000,000. Under no circumstances will the receipt of royalty payments from Zogenix in excess of the accrued interest then due be considered prepayments under the Term Loan.

In accordance with Accounting Standards Topic 470 *Debt*, the Company capitalized the fees, transaction and legal expenses of approximately \$473,000 and recorded this amount in other assets. The capitalized expenses will be amortized to interest expense using the effective interest method over a period of 48 months.

The Interest Reserve account was recorded in prepaid and other current assets.

In connection with the transaction, Aradigm issued to the lenders warrants to purchase a total of 2,840,909 shares of Aradigm common stock at a strike price of \$0.22 per share, representing a 20% premium above the average closing price of Aradigm common stock for the ten trading days immediately preceding the closing of the transaction. The warrants expire on December 31, 2016.

In accordance with Accounting Standards Topic 815, the warrants were treated as equity instruments and their fair value was determined to be approximately \$390,000. The fair value of the warrants is considered a discount against the note and was recorded as a reduction of the note payable. The fair value of the warrants will be amortized to interest expense using the effective interest method over a period of 48 months.



Table of Contents**ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)****9. Stock-Based Compensation and Stock Options, Awards and Units**

The following table shows the stock-based compensation expense included in the accompanying condensed consolidated statements of operations for the three and six months ended June 30, 2011 and 2010 (in thousands):

	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2011</b>	<b>2010</b>	<b>2011</b>	<b>2010</b>
Costs and expenses:				
Research and development	\$ 57	\$ 41	\$ 122	\$ 92
General and administrative	133	149	256	359
Total stock-based compensation expense	\$ 190	\$ 190	\$ 378	\$ 451

There was no capitalized stock-based employee compensation cost for the three and six months ended June 30, 2011 and 2010. Since the Company incurred net losses during the quarters ended June 30, 2011 and 2010, there was no recognized tax benefit associated with stock-based compensation expense.

The total amount of unrecognized compensation cost related to non-vested stock options and stock purchases, net of forfeitures, was \$0.5 million as of June 30, 2011. This amount will be recognized over a weighted average period of 1.25 years.

For restricted stock awards, the Company recognizes compensation expense over the vesting period for the fair value of the stock award on the measurement date. The total fair value of restricted stock awards that vested during the six months ended June 30, 2011 was \$79,000. The Company retained purchase rights with respect to 2,344,043 shares of unvested restricted stock awards issued pursuant to stock purchase agreements at no cost per share as of June 30, 2011. As of June 30, 2011, there was \$0.2 million of total unrecognized compensation costs, net of forfeitures, related to non-vested stock awards which are expected to be recognized over a weighted average period of 0.56 years.

***Stock Option Plans: 1996 Equity Incentive Plan, 2005 Equity Incentive Plan and 1996 Non-Employee Directors Plan***

The 1996 Equity Incentive Plan (the 1996 Plan ) and the 2005 Equity Incentive Plan (the 2005 Plan ), which amended, restated and retitled the 1996 Plan, were adopted to provide a means by which selected officers, directors, scientific advisory board members and employees of and consultants to the Company and its affiliates could be given an opportunity to acquire an equity interest in the Company. All employees, directors, officers, scientific advisory board members and consultants of the Company are eligible to participate in the 2005 Plan. During 2000, the Board of Directors approved the termination of the 1996 Non-Employee Directors Stock Option Plan (the Directors Plan ). This termination had no effect on options already outstanding under the Directors Plan.





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## ARADIGM CORPORATION

## NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)

*Stock Option Activity*

The following is a summary of activity under the 1996 Plan, the 2005 Plan and the Directors' Plan for the six months ended June 30, 2011:

	Shares Available for Grant of Option, Award or Unit	Number of Shares	Options Outstanding		Weighted Average Exercise Price
			Exercise Price Range		
Balance at January 1, 2011	1,959,278	6,354,758	\$ 0.12	\$ 64.69	\$ 1.32
Options granted	(500,000)	500,000	0.18	0.19	0.19
Options cancelled	84,898	(84,898)	\$ 0.25	\$ 64.69	\$ 9.69
Restricted share awards granted	(328,948)				
Restricted share units awarded	(78,947)				
Balance at June 30, 2011	1,136,281	6,769,860	\$ 0.12	\$ 24.10	\$ 1.13

Aggregate intrinsic value is the sum of the amounts by which the quoted market price of the Company's stock exceeded the exercise price of the stock options at June 30, 2011 for those stock options for which the quoted market price was in excess of the exercise price (in-the-money options). As of June 30, 2011, options to purchase 4,820,616 shares of common stock were exercisable and had an aggregate intrinsic value of \$52,000. No stock options were exercised during the six months ended June 30, 2011.

A summary of the Company's unvested restricted stock and performance bonus stock award as of June 30, 2011 is presented below representing the maximum number of shares that could be earned or vested under the 2005 Plan:

	Number of Shares	Weighted Average Grant Date Fair Value
Balance at December 31, 2010	2,448,273	\$ 0.44
Restricted share awards issued	328,948	0.19
Restricted share awards vested	(433,178)	0.18
Balance at June 30, 2011	2,344,043	\$ 0.45

During the three months ended June 30, 2011, the Company issued 78,947 shares of restricted stock units with no exercise price to a non-employee member of its Board of Directors. The units will vest on the earlier of either a change in control of the Company or upon the grantee's termination of service as a Board member. In 2011, the non-employee members of the Board of Directors elected to forego all or a portion of their cash compensation in lieu of the aforementioned restricted stock unit grants and restricted stock awards.

#### **10. Net Loss Per Common Share**

The Company computes basic net loss per common share using the weighted-average number of shares of common stock outstanding during the period less the weighted-average number of shares of common stock subject to repurchase. The effects of including the incremental shares associated with options, warrants and unvested restricted stock are anti-dilutive, and are not included in the diluted weighted average number of shares of common stock outstanding for the six month periods ended June 30, 2011 and 2010.

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**Table of Contents****ARADIGM CORPORATION****NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Company excluded the following securities from the calculation of diluted net loss per common share for the six months ended June 30, 2011 and 2010, as their effect would be anti-dilutive (in thousands):

	<b>Six Months Ended June 30,</b>	
	<b>2011</b>	<b>2010</b>
Outstanding stock options	6,770	4,962
Unvested restricted stock	2,344	2,497
Unvested restricted stock units	412	333
Outstanding common stock warrants	3,591	7,527

**11. Comprehensive Loss**

Comprehensive loss includes net loss and other comprehensive income (loss), which for the Company is primarily comprised of unrealized holding gains and losses on the Company's available-for-sale securities that are excluded from the accompanying condensed consolidated statements of operations in computing net loss and reported separately in shareholders' equity. Comprehensive loss and its components are as follows (in thousands):

	<b>Six Months Ended June 30,</b>	
	<b>2011</b>	<b>2010</b>
Net loss	\$ (5,341)	\$ (4,332)
Other comprehensive income (loss):		
Change in unrealized gain (loss) on available-for-sale securities		(2)
Comprehensive loss	\$ (5,341)	\$ (4,334)

**12. Subsequent Events*****July 2011 Private Placement***

On July 5, 2011, the Company entered into a definitive agreement for the sale of common stock to three existing shareholders, including accounts managed by First Eagle Investment Management LLC and Tavistock Life Sciences, in a private placement for aggregate gross proceeds of \$4.75 million. The closing of the private placement occurred on July 7, 2011. Under the terms of the agreement, the Company agreed to sell an aggregate of 25,000,000 shares of common stock at a price of \$0.19 per share. After deducting for fees and expenses, the net proceeds from the sale of the shares of common stock are anticipated to be approximately \$4.4 million. The Company will be required, among other things, to file a resale registration statement within 30 days following the closing that covers the resale by the purchasers of the shares.



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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors and Shareholders of Aradigm Corporation

We have audited the accompanying balance sheets of Aradigm Corporation as of December 31, 2010 and 2009, and the related statements of operations, shareholders' equity (deficit) and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements audited by us present fairly, in all material respects, the financial position of Aradigm Corporation at December 31, 2010 and 2009 and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations that raises substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Odenberg Ullakko Muranishi & Co LLP

San Francisco, California

March 23, 2011

**Table of Contents****ARADIGM CORPORATION****BALANCE SHEETS**

	<b>December 31,</b>	
	<b>2010</b>	<b>2009</b>
	<b>(In thousands, except share data)</b>	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 5,295	\$ 3,903
Short-term investments	251	5,228
Receivables	180	155
Prepaid and other current assets	180	328
Total current assets	5,906	9,614
Property and equipment, net	1,553	2,166
Notes receivable	54	52
Other assets	115	133
Total assets	\$ 7,628	\$ 11,965
<b>LIABILITIES AND SHAREHOLDERS EQUITY (DEFICIT)</b>		
Current liabilities:		
Accounts payable	\$ 257	\$ 572
Accrued clinical and cost of other studies	993	670
Accrued compensation	327	341
Facility lease exit obligation	99	263
Other accrued liabilities	450	357
Total current liabilities	2,126	2,203
Deferred rent, non-current	99	136
Facility lease exit obligation, non-current	729	828
Other non-current liabilities	75	75
Note payable and accrued interest		8,896
Total liabilities	3,029	12,138
Commitments and contingencies (See Note 8)		
Shareholders' equity (deficit):		
Preferred stock, 5,000,000 shares authorized, none outstanding		
Common stock, no par value; authorized shares: 213,527,214 at December 31, 2010 and 150,000,000 at December 31, 2009; issued and outstanding shares: 172,304,235 at December 31, 2010; 102,381,116 at December 31, 2009	358,424	348,271
Accumulated other comprehensive income		2
Accumulated deficit	(353,825)	(348,446)

Total shareholders' equity (deficit)	4,599	(173)
Total liabilities and shareholders' equity (deficit)	\$ 7,628	\$ 11,965

See accompanying Notes to Financial Statements.

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**ARADIGM CORPORATION**  
**STATEMENTS OF OPERATIONS**

	<b>Years Ended December 31,</b>	
	<b>2010</b>	<b>2009</b>
	<b>(In thousands, except per share data)</b>	
Revenue:		
Total revenue	\$ 4,383	\$ 4,883
Operating expenses:		
Research and development	10,210	11,406
General and administrative	4,485	5,030
Restructuring and asset impairment	48	1,874
Total operating expenses	14,743	18,310
Loss from operations	(10,360)	(13,427)
Interest income	20	72
Interest expense	(318)	(428)
Other income (expense), net	844	(4)
Gain from extinguishment of debt	4,435	
Loss before income taxes	(5,379)	(13,787)
Income tax benefit		15
Net loss	\$ (5,379)	\$ (13,772)
Basic and diluted net loss per common share	\$ (0.04)	\$ (0.15)
Shares used in computing basic and diluted net loss per common share	128,660	92,348

See accompanying Notes to Financial Statements.

Table of Contents**ARADIGM CORPORATION****STATEMENT OF SHAREHOLDERS EQUITY (DEFICIT)**

	<b>Common Stock</b>		<b>Accumulated Other Comprehensive Income (Loss)</b>		<b>Accumulated Deficit</b>	<b>Total Shareholders Equity (Deficit)</b>
	<b>Shares</b>	<b>Amount</b>				
	<b>(In thousands, except share data)</b>					
Balances at December 31, 2008	55,029,384	\$ 343,426	\$ 4	\$ (334,674)	\$	8,756
Issuance of common stock in a public offering, net of issuance costs	44,663,071	3,927				3,927
Issuance of common stock under the employee stock purchase plan	371,036	45				45
Stock-based compensation		873				873
Issuance of restricted stock awards	2,418,250					
Reversal of restricted stock award due to forfeiture	(100,625)					
Comprehensive loss:						
Net loss					(13,772)	(13,772)
Unrealized loss on available-for-sale investments			(2)			(2)
Total comprehensive loss						(13,774)
Balances at December 31, 2009	102,381,116	348,271	2	(348,446)		(173)
Issuance of common stock in a private offering, net of issuance costs	42,229,726	4,553				4,553
Issuance of common stock to Novo Nordisk, for extinguishment of debt, net of issuance costs	26,000,000	4,680				4,680
Issuance of common stock under the employee stock purchase plan	498,870	61				61
Issuance of restricted stock awards	1,824,523					
Reversal of restricted stock award due to forfeiture	(630,000)					
Stock-based compensation		859				859
Comprehensive loss:						
Net loss					(5,379)	(5,379)
Unrealized loss on available-for-sale investments			(2)			(2)
Total comprehensive loss						(5,381)
Balances at December 31, 2010	172,304,235	\$ 358,424	\$	\$ (353,825)	\$	4,599

See accompanying Notes to Financial Statements.

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Table of Contents**ARADIGM CORPORATION****STATEMENTS OF CASH FLOWS**

	<b>Years Ended December 31,</b>	
	<b>2010</b>	<b>2009</b>
	<b>(In thousands)</b>	
<b>Cash flows from operating activities:</b>		
Net loss	\$ (5,379)	\$ (13,772)
Adjustments to reconcile net loss to net cash used in operating activities:		
Non-cash asset impairment on property and equipment		1,654
Facility lease exit costs		158
Amortization and accretion of investments	26	21
Depreciation and amortization	606	1,067
Stock-based compensation expense	859	873
Loss on disposal of property and equipment	11	4
Gain on extinguishment of debt	(4,526)	
Changes in operating assets and liabilities:		
Receivables	(25)	238
Prepaid and other current assets	148	61
Restricted cash		225
Other assets	16	14
Accounts payable	(314)	(167)
Accrued compensation	(14)	(710)
Accrued liabilities	726	720
Deferred rent	(37)	(63)
Deferred revenue		(4,122)
Facility lease exit obligation	(263)	(325)
Net cash used in operating activities	(8,166)	(14,124)
<b>Cash flows from investing activities:</b>		
Capital expenditures	(5)	185
Purchases of available-for-sale investments	(521)	(11,438)
Proceeds from maturities of available-for-sale investments	5,470	8,585
Notes receivable payments		(18)
Net cash provided by (used in) investing activities	4,944	(2,686)
<b>Cash flows from financing activities:</b>		
Proceeds from public offering of common stock, net	4,553	3,927
Proceeds from issuance of common stock to Employee Stock Purchase Plan	61	45
Net cash provided by financing activities	4,614	3,972
Net increase (decrease) in cash and cash equivalents	1,392	(12,838)

Cash and cash equivalents at beginning of year	3,903	16,741
Cash and cash equivalents at end of year	\$ 5,295	\$ 3,903
<b>Supplemental disclosure of cash flow information:</b>		
Cash received for income taxes	\$ (16)	\$ (25)
Cash paid for interest	\$	\$ 4
Non cash reduction in note payable from issuance of common stock	\$ 4,680	\$

See accompanying Notes to Financial Statements.

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS**

**1. Organization and Summary of Significant Accounting Policies**

***Organization***

Aradigm Corporation (the Company) is a California corporation, incorporated in 1991, focused on the development and commercialization of drugs delivered by inhalation for the treatment of severe respiratory diseases. The Company's principal activities to date have included conducting research and development and developing collaborations. Management does not anticipate receiving revenues from the sale of any of its products in the upcoming year, except for the royalty revenue from Zogenix. The Company operates as a single operating segment.

***Liquidity and Financial Condition***

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred significant operating losses and negative cash flows from operations. At December 31, 2010, the Company had an accumulated deficit of \$353.8 million, working capital of \$3.8 million and shareholders equity of \$4.6 million. Management believes that the cash resources as of December 31, 2010, along with quarterly royalty payments from Zogenix, are sufficient to meet its obligations through at least the second quarter of 2011 since the Company continues to defer certain discretionary activities. The Company will require additional capital to fund its drug development and operating activities and is currently seeking additional financing, which may include a collaborative arrangement, an equity offering, a royalty monetization or sale or licensing of non-core assets, in order to continue such activities. If the Company is unable to complete such a transaction or is unable to obtain sufficient financing on acceptable terms or otherwise, the Company may be required to further reduce, defer or discontinue its activities or may not be able to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

***Use of Estimates***

The preparation of financial statements, in conformity with United States generally accepted accounting principles, requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. These estimates include useful lives for property and equipment and related depreciation calculations, estimated amortization period for payments received from product development and license agreements as they relate to the revenue recognition, assumptions for valuing options and warrants, and income taxes. Actual results could differ from these estimates.

***Cash Equivalents***

All highly liquid investments with maturities of three months or less at the time of purchase are classified as cash equivalents.

***Investments***

Management determines the appropriate classification of the Company's marketable securities, which consist solely of debt securities, at the time of purchase. All marketable securities are classified as available-for-sale, carried at estimated fair value and reported in short-term investments. Unrealized gains and losses on available-for-sale securities are excluded from earnings and losses and are reported as a separate component in the statement of

shareholders' equity (deficit) until realized. Fair values of investments are based on quoted market prices where available. Investment income is recognized when earned and includes interest, dividends, amortization of purchase premiums and discounts and realized gains and losses on sales of securities. The cost of securities sold is based on the specific identification method. The Company regularly reviews all of its investments for other-than-temporary declines in fair value. When the Company determines that the decline in fair value of an investment below the Company's accounting basis is other-than-temporary, the Company reduces the carrying

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

value of the securities held and records a loss in the amount of any such decline. No such reductions have been required during any of the periods presented.

***Property and Equipment***

The Company records property and equipment at cost and calculates depreciation using the straight-line method over the estimated useful lives of the respective assets. Machinery and equipment includes external costs incurred for validation of the equipment. The Company does not capitalize internal validation expense. Computer equipment and software includes capitalized computer software. All of the Company's capitalized software is purchased; the Company has not internally developed computer software. Leasehold improvements are depreciated over the shorter of the term of the lease or useful life of the improvement.

The estimated useful lives of property and equipment are as follows:

Computer equipment and software	3 to 5 years
Furniture and fixtures	5 to 7 years
Lab equipment	5 to 7 years
Machinery and equipment	5 years
Leasehold improvements	5 to 17 years

***Impairment of Long-Lived Assets***

In accordance with Statement of Accounting Standards Codification (ASC) 360-10, *Property Plant and Equipment Overall*, the Company reviews for impairment whenever events or changes in circumstances indicate that the carrying amount of property and equipment may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written down to their estimated fair values and the loss is recognized in the statements of operations (see Note 11).

***Accounting for Costs Associated with Exit or Disposal Activities***

In accordance with ASC 420, *Exit or Disposal Activities* the Company recognizes a liability for the cost associated with an exit or disposal activity that is measured initially at its fair value in the period in which the liability is incurred. The Company accounted for the partial sublease of its headquarters building as an exit activity and recorded the sublease loss in its statement of operations (see Note 5).

According to ASC 420, costs to terminate an operating lease or other contracts are (a) costs to terminate the contract before the end of its term or (b) costs that will continue to be incurred under the contract for its remaining term without economic benefit to the entity. In periods subsequent to initial measurement, changes to the liability are measured using the risk-free rate that was used to measure the liability initially.

***Revenue Recognition***



Contract revenues consist of revenues from grants, collaboration agreements and feasibility studies. The Company recognizes revenue under the provisions of the Securities and Exchange Commission issued Staff Accounting Bulletin 104, Topic 13, *Revenue Recognition Revised and Updated* ( SAB Topic 13 ) and ASC 605-25, *Revenue Recognition-Multiple Elements*. Revenue for arrangements not having multiple deliverables, as outlined in ASC 605-25, is recognized once costs are incurred and collectability is reasonably assured.

In accordance with contract terms, milestone payments from collaborative research agreements are considered reimbursements for costs incurred under the agreements and, accordingly, are recognized as revenue either upon completion of the milestone effort, when payments are contingent upon completion of the effort, or are based on

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

actual efforts expended over the remaining term of the agreement when payments precede the required efforts. Refundable development payments are deferred until specific performance criteria are achieved. Refundable development payments are generally not refundable once specific performance criteria are achieved and accepted.

Collaborative license and development agreements that require the Company to provide multiple deliverables, such as a license, research and product steering committee services and other performance obligations, are accounted for in accordance with ASC 605-25. Under ASC 605-25, delivered items are evaluated to determine whether such items have value to the Company's collaborators on a stand-alone basis and whether objective reliable evidence of fair value of the undelivered items exists. Deliverables that meet these criteria are considered a separate unit of accounting. Deliverables that do not meet these criteria are combined and accounted for as a single unit of accounting. The appropriate revenue recognition criteria are identified and applied to each separate unit of accounting.

The Company determined that the Lung Rx collaboration agreement, since it was comprised of multiple deliverables without standalone value, should be treated as a single unit of accounting.

***Research and Development***

Research and development expenses consist of costs incurred for company-sponsored, collaborative and contracted research and development activities. These costs include direct and research-related overhead expenses. The Company expenses research and development costs as incurred.

***Stock-Based Compensation***

The Company accounts for share-based payment arrangements in accordance with ASC 718, *Compensation-Stock Compensation and ASC 505-50, Equity-Equity Based Payments to Non-Employees* which requires the recognition of compensation expense, using a fair-value based method, for all costs related to share-based payments including stock options and restricted stock awards and stock issued under the employee stock purchase plan. These standards require companies to estimate the fair value of share-based payment awards on the date of the grant using an option-pricing model. See Note 9 for further discussion of the Company's stock-based compensation plans.

***Other Income***

The Company received notification in October 2010 from the U.S. Internal Revenue Service (IRS) that it was approved to receive three grants in the amount of \$244,479 each for qualified investments in three qualifying therapeutic discovery projects. In July 2010, the Company applied for grants for three projects under the Qualifying Therapeutic Discovery Project. The three projects were: 1) ARD-3150 Liposomal Ciprofloxacin for the Treatment of Non-CF Bronchiectasis, 2) ARD-3100 Liposomal Ciprofloxacin for the Treatment of Non-CF Bronchiectasis and 3) ARD-3100 Liposomal Ciprofloxacin for the Treatment of Cystic Fibrosis. After a determination by U.S. Department of Health and Human Services (HHS) that all three projects met the definition of a qualifying therapeutic discovery project, the IRS certified the qualifying investment and approved the award amount of \$244,479 per project, for a total of \$733,438 in awards to the Company. The qualified investments represent 2009 research and development expenses; there are no future performance obligations related to these grants.

***Income Taxes***

The Company makes certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of the recognition of revenue and expense for tax and financial statement purposes. As part of the process of preparing the financial statements, the Company is required to estimate its income taxes in each of the jurisdictions in which it operates. This process involves the estimation of the current tax exposure under the most recent tax laws and assessing temporary differences resulting from differing treatment of

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

items for tax and accounting purposes. These differences result in deferred tax assets and liabilities which are included in the Company's balance sheets.

The Company assesses the likelihood that they will be able to recover their deferred tax assets. The Company considers all available evidence, both positive and negative, including its historical levels of income and losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. If the Company does not consider it more likely than not that they will recover their deferred tax assets, they will record a valuation allowance against the deferred tax assets that they estimate will not ultimately be recoverable. At December 31, 2010 and 2009, the Company believed that the amount of their deferred income taxes would not be ultimately recovered. Accordingly, the Company recorded a full valuation allowance for deferred tax assets. However, should there be a change in the Company's ability to recover its deferred tax assets, they would recognize a benefit to their tax provision in the period in which they determine that it is more likely than not that they will recover their deferred tax assets.

***Net Loss Per Common Share***

Basic net loss per common share is computed using the weighted-average number of shares of common stock outstanding less the weighted-average number of shares subject to repurchase. Unvested restricted stock awards subject to repurchase totaled 2,448,000 shares and 2,668,000 shares for the years ended December 31, 2010 and 2009, respectively. Potentially dilutive securities were not included in the net loss per share calculation for the years ended December 31, 2010 and 2009 because the inclusion of such shares would have had an anti-dilutive effect.

Potentially dilutive securities include the following (in thousands):

	<b>Years Ended December 31,</b>	
	<b>2010</b>	<b>2009</b>
Outstanding stock options	6,355	5,088
Unvested restricted stock awards	2,448	2,668

***Significant Concentrations***

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash, cash equivalents and short-term investments. Risks associated with these instruments are mitigated by banking with, and only purchasing commercial paper and corporate notes from, creditworthy institutions. The maximum amount of loss due to credit risk associated with these financial instruments is their respective fair values as stated in the accompanying balance sheets.

***Comprehensive Income (Loss)***

ASC 220, *Comprehensive Income* requires that an entity's change in equity or net assets during a period from transactions and other events from non-owner sources be reported. The Company reports unrealized gains or losses on its available-for-sale securities as other comprehensive income (loss). Total comprehensive income (loss) has been

disclosed on the statement of shareholders' equity (deficit).

***Recently Issued Accounting Pronouncements***

In April 2010, the Financial Accounting Standards Board ( FASB ) issued Accounting Standards Update ( ASU ) 2010-17, *Milestone Method of Revenue Recognition a consensus of the FASB Emerging Issues Task Force*. This standard provides guidance on defining a milestone and determining when it may be appropriate to apply the milestone method for revenue recognition for research and development arrangements. This standard provides guidance on the criteria that should be met to recognize revenue upon achievement of the related milestone event. The ASU is effective for fiscal years (and interim periods within those fiscal years) beginning on or after June 15,

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

2010. The Company adopted this guidance in the third quarter of 2010. While the Company does not expect the adoption of this standard to have a material impact on the Company's financial position and results of operations, this standard may impact the Company in the event the Company completes future transactions.

In September 2009, the FASB issued Accounting Standards Update (ASU) No. 2009-13 *Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements* (formerly EITF Issue No. 08-1 *Revenue Arrangements with Multiple Deliverables*). This standard modifies the revenue recognition guidance for arrangements that involve the delivery of multiple elements, such as product, license fees and research and development reimbursements, to a customer at different times as part of a single revenue generating transaction. This standard provides principles and application guidance to determine whether multiple deliverables exist, how the individual deliverables should be separated and how to allocate the revenue in the arrangement among those separate deliverables. The standard also significantly expands the disclosure requirements for multiple deliverable revenue arrangements. While the Company does not expect the adoption of this standard to have a material impact on the Company's financial position and results of operations, this standard may impact the Company in the event the Company completes future transactions.

**2. Cash and Cash Equivalents and Short-term Investments**

A summary of cash and cash equivalents and short-term investments, classified as available-for-sale and carried at fair value is as follows (in thousands):

	Amortized Cost	Gross Unrealized Gain	Gross Unrealized (Loss)	Estimated Fair Value
<b>December 31, 2010</b>				
Cash and cash equivalents	\$ 5,295	\$	\$	\$ 5,295
Short-term investments:				
U.S. Treasury and agencies	251			251
Total	\$ 251	\$	\$	\$ 251
<b>December 31, 2009</b>				
Cash and cash equivalents	\$ 3,903	\$	\$	\$ 3,903
Short-term investments:				
Commercial paper	\$ 500	\$	\$	\$ 500
Certificates of deposit	3,183	2		3,185
U.S. Treasury and agencies	1,543			1,543
Total	\$ 5,226	\$ 2	\$	\$ 5,228

All short-term investments at December 31, 2010 and 2009 mature in less than one year. Unrealized holding gains and losses on securities classified as available-for-sale are recorded in accumulated other comprehensive income. As of December 31, 2010 and 2009 the difference between the fair value and amortized cost of available-for-sale securities were gains of zero and \$2,000, respectively.

### **3. Fair Value Measurements**

Effective January 1, 2008, the Company adopted SFAS 157, *Fair Value Measurements*. (now referred to as ASC 820) which clarifies the definition of fair value, prescribes methods for measuring fair value, establishes a fair value hierarchy based on the inputs used to measure fair value and expands disclosures about the use of fair value measurements. The fair value hierarchy has three levels based on the reliability of the inputs used to determine fair value. Level 1 values are based on quoted prices in active markets. Level 2 values are based on significant other

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

observable inputs. Level 3 values are based on significant unobservable inputs. The following table presents the fair value level for the cash and cash equivalents and short-term investments which represents the assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy. The Company does not have any liabilities that are measured at fair value.

Description	Balance	Level 1	Level 2	Level 3
	December 31, 2010			
		(In thousands)		
Cash and cash equivalents	\$ 5,295	\$ 333	\$ 4,962	\$
Short-term investments	251		251	
Total	\$ 5,546	\$ 333	\$ 5,213	\$

The Company's cash and cash equivalents at December 31, 2010 consist of cash, commercial paper, U.S. Treasury and agency notes and money market funds. Money market funds are valued using quoted market prices. The Company's short-term investments at December 31, 2010 consist of U.S. Treasury notes. The Company uses an independent third party pricing service to value these securities. The pricing service uses observable inputs such as new issue money market rates, adjustment spreads, corporate actions and other factors and applies a series of matrices pricing model. The Company performs a review of prices reported by the pricing service to determine if they are reasonable estimates of fair value. In addition, the Company performs a review of its securities to determine the proper classification in accordance with the fair value hierarchy.

**4. Property and Equipment**

Property and equipment consist of the following (in thousands):

	December 31,	
	2010	2009
Machinery and equipment	\$ 4,410	\$ 4,510
Furniture and fixtures	1,138	1,138
Lab equipment	2,150	2,488
Computer equipment and software	2,630	2,630
Leasehold improvements	1,839	1,861
Property and equipment at cost	12,167	12,627
Less accumulated depreciation and amortization	(10,614)	(10,461)
Property and equipment, net	\$ 1,553	\$ 2,166



Depreciation expense was \$606,000 and \$1,067,000 for the years ended December 31, 2010 and 2009, respectively.

**5. Sublease Agreement and Lease Exit Liability:**

On July 18, 2007, the Company entered into a sublease agreement with Mendel to lease approximately 48,000 square feet of the Company's 72,000 square foot headquarters facility located in Hayward, California. In April 2009, the Company entered into an amendment to its sublease agreement with Mendel to sublease to Mendel an additional 1,550 square feet. The Company recorded an additional sublease loss on the amendment since the monthly payments the Company expects to receive are less than the Company will owe the lessor for the subleased space.

During the year ended December 31, 2007, the Company recorded a \$2.1 million lease exit liability and related expense for the expected loss on the sublease, in accordance with ASC 420 *Exit or Disposal Cost Obligations*,

Table of Contents**ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

because the monthly payments the Company expects to receive under the sublease are less than the amounts that the Company will owe the lessor for the sublease space. The fair value of the lease exit liability was determined using a credit-adjusted risk-free rate to discount the estimated future net cash flows, consisting of the minimum lease payments to the lessor for the sublease space and payments the Company will receive under the sublease. The sublease loss and ongoing accretion expense required to record the lease exit liability at its fair value using the interest method have been recorded as part of restructuring and asset impairment expense in the statement of operations. The lease exit liability activity for the years ended December 31, 2010 and 2009 are as follows (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2010</b>	<b>2009</b>
Balance at beginning of year	\$ 1,091	\$ 1,374
Loss on sublease amendment to Mendel		42
Accretion expense	48	61
Lease payments	(311)	(386)
Balance at end of the year	\$ 828	\$ 1,091

The Company classified \$99,000 of the \$828,000 lease exit liability in current liabilities and the remaining \$729,000 in non-current liabilities in the accompanying balance sheet at December 31, 2010. At December 31, 2009, the Company classified \$263,000 of the lease exit liability in current liabilities and \$828,000 in non-current liabilities.

**6. Other Liabilities**

Other liabilities consist of the following (in thousands):

	<b>December 31,</b>	
	<b>2010</b>	<b>2009</b>
Other accrued liabilities:		
Accrued expense for services	\$ 413	\$ 302
Payroll withholding liabilities	37	47
Other short term obligations		8
Total other accrued liabilities	\$ 450	\$ 357
Other non-current liabilities:		
Deposits	\$ 75	\$ 75
Total other non-current liabilities	\$ 75	\$ 75

In July 2010, the Company entered into an agreement with the landlord to defer a portion of its monthly rent payments each month over a one year period. The repayment period will be over 12 months beginning in September 2011. Deferred amounts will accrue interest charges at an interest rate of 10 percent per annum. As of December 31, 2010 the deferred landlord rent and interest that was included in accrued expense for services was \$235,000.

**7. Notes Payable and Accrued Interest and Debt Extinguishment**

On September 15, 2010, the Company closed the issuance to Novo Nordisk A/S of 26,000,000 shares of common stock under a stock purchase agreement, dated as of July 30, 2010, by and among Aradigm and Novo Nordisk A/S (the Novo Nordisk Stock Purchase Agreement ), in consideration for the termination of all of the Company's obligations under a promissory note and security agreement dated July 3, 2006 in favor of Novo Nordisk

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

A/S. The closing occurred after the Company held a special meeting of shareholders on September 14, 2010 and obtained the requisite shareholder approval on a proposal to amend its amended and restated articles of incorporation to increase the total number of authorized shares of its common stock to cover the 26,000,000 shares issuable under the Novo Nordisk Stock Purchase Agreement. An amended and restated stock purchase agreement, dated as of January 26, 2005, previously entered into by the Company, Novo Nordisk A/S and Novo Nordisk Pharmaceuticals, Inc. in connection with the January 2005 restructuring transaction with Novo Nordisk was also terminated at the closing. The July 3, 2006 promissory note and security agreement had evidenced, among other things, a loan that had been previously made by Novo Nordisk A/S to the Company in the principal amount of \$7.5 million, which bore interest accruing at 5% per annum and the principal, along with the accrued interest, had been payable in three equal payments of approximately \$3.5 million on July 2, 2012, July 1, 2013 and June 30, 2014.

The Company valued the common stock issued at \$4.7 million using the closing price on the day preceding the day of issuance of the shares following the special meeting of shareholders and recorded the difference between the value of the common stock issued and the carrying value of the note and accrued interest as a Gain from debt extinguishment of \$4.5 million in the condensed statement of operations. The Gain from debt extinguishment on the consolidated statement of operations was reduced by direct legal costs incurred of \$91,000. The impact on earnings per share was a net gain of \$0.03 as of December 31, 2010.

**8. Leases, Commitments and Contingencies**

The Company has a lease for a building containing office and laboratory and manufacturing facilities, which expires in 2016. A portion of this lease obligation was offset by a sublease to Mendel Biotechnology, Inc. ( Mendel ). Future minimum non-cancelable lease payments at December 31, 2010 are as follows (in thousands):

	<b>Operating Leases</b>	<b>Mendel Sub-Lease</b>	<b>Net Operating Lease Payments</b>
Year ending December 31:			
2011	1,639	(986)	653
2012	1,704	(896)	808
2013	1,774		1,774
2014	1,844		1,844
2015	1,918		1,918
2016	1,020		1,020
Total minimum lease payments	\$ 9,899	\$ (1,882)	\$ 8,017

In July 2007, the Company entered into a sublease agreement with Mendel to lease approximately 48,000 square feet of its 72,000 square foot headquarters located in Hayward, California. In April 2009, the Company entered into an amendment to its sublease agreement with Mendel to sublease an additional 1,550 square feet.

The sublease commenced in July 2007 and expires concurrently with the master lease in July 2016. Under the sublease and amendment, Mendel will make monthly base rent payments totaling \$1.7 million (exclusive of the termination fee) through August 2012 that will offset a portion of the Company's existing building lease obligation. Mendel has the option for early termination of the sublease on September 1, 2012 for a termination fee of \$225,000. If the option to terminate the sublease is not exercised by Mendel, the Company will receive a total of \$4.2 million of additional monthly base rent payments through the expiration of the sublease in 2016. Mendel will also pay the Company for its share of all pass through costs such as taxes, operating expenses and utilities based on the percentage of the facility space occupied by them.

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

The Company's monthly rent payments fluctuates under the master lease. In accordance with U.S. generally accepted accounting principles, the Company recognizes rent expense on a straight-line basis. The Company records deferred rent for the difference between the amounts paid and recorded as expense. At December 31, 2010 and 2009, the Company had \$99,000 and \$136,000 of deferred rent, respectively.

For the years ended December 31, 2010 and 2009, building rent expense under operating leases totaled \$661,000 and \$609,000 respectively.

***Indemnification***

The Company from time to time enters into contracts that contingently require the Company to indemnify parties against third party claims. These contracts primarily relate to: (i) real estate leases, under which the Company may be required to indemnify property owners for environmental and other liabilities, and other claims arising from the Company's use of the applicable premises, and (ii) agreements with the Company's officers, directors and employees, under which the Company may be required to indemnify such persons from certain liabilities arising out of such persons' relationships with the Company. To date, the Company has made no payments related to such indemnifications and no liabilities have been recorded for these obligations on the balance sheets at December 31, 2010 or 2009.

***Legal Matters***

From time to time, the Company is involved in litigation arising out of the ordinary course of its business. Currently there are no known claims or pending litigation expected to have a material effect on the Company's overall financial position, results of operations, or liquidity.

**9. Shareholders Equity**

On June 21, 2010, the Company closed the June 2010 Private Placement, in which the Company sold 34,702,512 shares of common stock and warrants to purchase an aggregate of 7,527,214 shares of common stock to accredited investors (which included several existing significant investors) under the terms of a securities purchase agreement that was entered into with the investors on June 18, 2010. At the closing of the June 2010 Private Placement, the Company received approximately \$4.1 million in aggregate gross proceeds from the sale of the common stock and the warrants. After deducting for fees and expenses, the aggregate net proceeds from the sale of the common stock and the warrants were approximately \$3.7 million. After the Company held a special meeting of shareholders on September 14, 2010 and obtained the requisite shareholder approval on a proposal to amend the Company's amended and restated articles of incorporation to increase the total number of authorized shares of common stock to cover the shares issuable upon exercise of the warrants, the warrants were exercised and the Company received approximately \$0.9 million in additional aggregate net proceeds from the exercise of the warrants. The shares were registered for resale on Form S-1 (no. 333-168770). The registration statement was declared effective by the SEC on November 9, 2010.

On February 26, 2009, the Company closed a registered direct offering covering the sale of an aggregate of 44.7 million shares under a shelf registration statement on Form S-3 (no. 333-148623) that was previously filed by the Company on December 21, 2007 and declared effective by the SEC on January 25, 2008. The Company received net proceeds, after offering expenses, of \$3.9 million.

***Reserved Shares***

At December 31, 2010 the Company had 6,354,758 shares reserved for issuance upon exercise of options under all stock option plans and 1,959,278 shares of common stock reserved for issuance of new option grants. The Company had 2,570,010 shares available for future issuances under the ESPP.

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

***Shareholder Rights Plan***

In September 2008, the Company adopted an amended and restated shareholder rights plan, which replaced the rights plan originally adopted in August 1998. Pursuant to the rights plan, as amended and restated, the Company distributes rights to purchase shares of Series A Junior Participating Preferred Stock as a dividend at the rate of one right for each share of common stock outstanding. Until the rights are distributed, the rights trade with, and are not separable from, the Company's common stock and are not exercisable. The rights are designed to guard against partial tender offers and other abusive and coercive tactics that might be used in an attempt to gain control of the Company or to deprive the Company's shareholders of their interest in the Company's long-term value. The shareholder rights plan seeks to achieve these goals by encouraging a potential acquirer to negotiate with the Company's Board of Directors. The rights will expire at the close of business on September 8, 2018.

***Stock Option Plans: 1996 Equity Incentive Plan, 2005 Equity Incentive Plan and 1996 Non-Employee Directors Plan***

The 1996 Equity Incentive Plan (the "1996 Plan") and the 2005 Equity Incentive Plan (the "2005 Plan"), which amended, restated and retitled the 1996 Plan, were adopted to provide a means by which officers, non-employee directors, scientific advisory board members and employees of and consultants to the Company and its affiliates could be given an opportunity to acquire an equity interest in the Company. All officers, non-employee directors, scientific advisory board members and employees of and consultants to the Company are eligible to participate in the 2005 Plan.

In April 1996, the Company's Board of Directors adopted and the Company's shareholders approved the 1996 Plan, which amended and restated an earlier stock option plan. The 1996 Plan reserved 960,000 shares for future grants. During May 2001, the Company's shareholders approved an amendment to the Plan to include an evergreen provision. In 2003, the 1996 Plan was amended to increase the maximum number of shares available for issuance under the evergreen feature of the 1996 Plan by 400,000 shares to 2,000,000 shares. The evergreen provision automatically increased the number of shares reserved under the 1996 Plan, subject to certain limitations, by 6% of the issued and outstanding shares of common stock of the Company or such lesser number of shares as determined by the Board of Directors on the date of the annual meeting of shareholders of each fiscal year beginning 2001 and ending 2005. As of December 31, 2010, the Company had 279,866 options outstanding and 35,417 shares were available for future grants under the 1996 Plan.

In March 2005, the Company's Board of Directors adopted and in May 2005 the Company's shareholders approved the 2005 Plan, which amended, restated and retitled the 1996 Plan. All outstanding awards granted under the 1996 Plan remain subject to the terms of the 1996 Plan. All stock awards granted on or after the adoption date are subject to the terms of the 2005 Plan. No shares were added to the share reserve under the 2005 Plan other than the shares available for future issuance under the 1996 Plan. Pursuant to the 2005 Plan, the Company had 2,918,638 shares of common stock authorized for issuance. Options (net of canceled or expired options) covering an aggregate of 1,999,252 shares of the Company's common stock had been granted under the 1996 Plan, and 919,386 shares became available for future grant under the 2005 Plan. In March 2006, the Company's Board of Directors amended, and in May 2006 the Company's shareholders approved, the amendment to the 2005 Plan, increasing the shares of common stock authorized for issuance by 2,000,000. In April 2007, the Company's Board of Directors amended, and in June 2007, the Company's shareholders approved the amendment to the 2005 Plan, increasing the shares of common stock authorized for issuance by 1,600,000 shares. In March 2008, the Company's Board of Directors amended, and in May 2008 the Company shareholder's approved, the amendment to the 2005 Plan, increasing the shares of common stock authorized



by 2,700,000. In March 2010, the Company's Board of Directors amended, and in May 2010 the Company shareholder's approved the amendment to the 2005 Plan, increasing the shares of common stock authorized by 4,000,000. Shares available for future grants totaled 1,923,861 as of December 31, 2010 for the 2005 Plan.

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

Options granted under the 2005 Plan expire no later than 10 years from the date of grant. Options granted under the 2005 Plan may be either incentive or non-statutory stock options. For incentive and non-statutory stock option grants, the option price shall be at least 100% and 85%, respectively, of the fair value on the date of grant, as determined by the Company's Board of Directors. If at any time the Company grants an option, and the optionee directly or by attribution owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, the option price shall be at least 110% of the fair value and shall not be exercisable more than five years after the date of grant.

Options granted under the 2005 Plan may be immediately exercisable if permitted in the specific grant approved by the Board of Directors and, if exercised early may be subject to repurchase provisions. The shares acquired generally vest over a period of four years from the date of grant. The 2005 Plan also provides for a transition from employee to consultant status without termination of the vesting period as a result of such transition. Under the 2005 Plan, employees may exercise options in exchange for a note payable to the Company, if permitted under the applicable grant. As of December 31, 2010 and 2009, there were no outstanding notes receivable from shareholders. Any unvested stock issued is subject to repurchase agreements whereby the Company has the option to repurchase unvested shares upon termination of employment at the original issue price. The common stock subject to repurchase has voting rights, but cannot be resold prior to vesting. No grants with early exercise provisions have been made under the 2005 Plan and no shares have been repurchased. The Company granted options to purchase 1,990,000 shares and 2,078,000 shares during the years ended December 31, 2010 and 2009, respectively, under the 2005 Plan, which included option grants to the Company's non-employee directors in the amount of 450,000 shares and 600,000 shares during 2010 and 2009, respectively. The 2005 Plan had 6,074,892 option shares outstanding as of December 31, 2010.

The 1996 Non-Employee Directors' Stock Option Plan (the Directors' Plan) had 45,000 shares of common stock authorized for issuance. Options granted under the Directors' Plan expire no later than 10 years from date of grant. The option price shall be at 100% of the fair value on the date of grant as determined by the Board of Directors. The options generally vest quarterly over a period of one year. During 2000, the Board of Directors approved the termination of the Directors' Plan. No more options can be granted under the plan after its termination. The termination of the Directors' Plan had no effect on the options already outstanding. There were 9,736 and 3,407 shares cancelled due to option expirations for the years ended December 31, 2010 and 2009, respectively. As of December 31, 2010, there were no outstanding options in this plan and there were no additional shares available for grant.

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

The following is a summary of activity under the 1996 Plan, the 2005 Plan and the Directors Plan as of December 31, 2010:

	Shares Available for Grant of Option or Award	Number of Shares	Options Outstanding		Weighted
			Price per Share		Average Exercise Price
Balance at December 31, 2008	3,987,599	4,185,061	\$ 0.39	\$ 120.63	\$ 4.14
Options authorized					
Options granted	(2,078,000)	2,078,000	\$ 0.15	\$ 0.25	\$ 0.22
Options exercised			\$	\$	\$
Restricted stock awards granted	(2,418,250)				
Options cancelled	1,174,618	(1,174,618)	\$ 0.17	\$ 112.50	\$ 4.34
Restricted share awards cancelled	100,625				
Plan shares cancelled and not reauthorized	(3,407)		\$ 41.25	\$ 42.19	\$ 41.78
Balance at December 31, 2009	763,185	5,088,443	\$ 0.15	\$ 120.63	\$ 2.49
Shares added	4,000,000		\$	\$	\$
Options granted	(1,990,000)	1,990,000	\$ 0.12	\$ 0.18	\$ 0.17
Options exercised					
Restricted stock awards granted	(2,157,856)				
Options cancelled	723,685	(723,685)	\$ 0.25	\$ 120.63	\$ 6.43
Restricted share awards cancelled	630,000				
Plan shares cancelled and not reauthorized	(9,736)		\$ 107.81	\$ 120.63	\$ 113.26
Balance at December 31, 2010	1,959,278	6,354,758	\$ 0.12	\$ 64.69	\$ 1.32

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

Exercise Price Range	Number Of Shares	Options Outstanding		Options Exercisable	
		Weighted Average Remaining Contractual	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price

**Life (In  
Years)**

\$0.12	\$0.15	456,000	9.42	\$ 0.13	151,500	\$ 0.12
\$0.16	\$0.23	2,194,000	9.31	0.18	826,250	0.17
\$0.24	\$0.39	1,083,031	7.98	0.28	514,059	0.28
\$0.40	\$0.87	90,000	7.42	0.81	83,437	0.83
\$0.88	\$1.41	497,861	6.27	1.31	462,919	1.30
\$1.42	\$1.87	1,672,000	6.03	1.72	1,521,812	1.74
\$1.88	\$4.75	93,300	4.29	3.99	93,300	3.99
\$4.76	\$9.45	137,700	3.59	6.06	137,700	6.06
\$9.46	\$34.00	130,026	1.37	21.17	130,026	21.17
\$34.01	\$64.69	840	0.10	63.93	840	63.93
		6,354,758	7.60	\$ 1.32	3,921,843	\$ 1.95

Aggregate intrinsic value is the sum of the amounts by which the quoted market price of the Company's stock exceeded the exercise price of the stock options at December 31, 2010 and 2009 for those stock options for which

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the quoted market price was in excess of the exercise price ( in-the-money options ). As of December 31, 2010 and 2009, the aggregate intrinsic value of options outstanding was \$26,000 and zero, respectively. As of December 31, 2010, options to purchase 3,921,843 shares of common stock were exercisable and had an aggregate intrinsic value of \$14,000. No stock options were exercised in 2010 or 2009.

A summary of the activity of the Company's unvested restricted stock and performance bonus stock award activities for the years ending December 31, 2010 and 2009 is presented below. The ending balances represent the maximum number of shares that could be earned or vested under the 2005 Plan:

	Number of Shares	Weighted Average Grant Date Fair Value
Balance at December 31, 2008	703,535	\$ 1.60
Restricted stock awards granted	2,418,250	0.16
Restricted share awards vested	(353,154)	0.90
Restricted share awards cancelled	(100,625)	0.99
Balance at December 31, 2009	2,668,006	0.41
Restricted stock awards granted	1,824,523	0.16
Restricted share awards vested	(1,414,256)	0.19
Restricted share awards cancelled	(630,000)	0.13
Balance at December 31, 2010	2,448,273	0.44

For restricted stock awards, the Company recognizes compensation expense over the vesting period for the fair value of the stock award on the measurement date. The Company's 2010 restricted stock awards granted included 100,000 shares with vesting provisions based solely on the achievement of performance-based milestones. The Company's 2009 restricted stock awards granted included 600,000 shares with vesting provisions based solely on the achievement of performance-based milestones. One of the restricted performance-based milestone awards from 2009 for 200,000 shares was achieved in 2010 and the rest were cancelled as the performance-based criteria were not met. The Company records expense for these awards if achievement of the award is probable. Expense is recorded over the estimated service period until the performance-based milestone is achieved.

The total fair value of restricted stock awards that did vest during the years ended December 31, 2010 and 2009 was \$169,000 and \$66,000, respectively. The Company retained purchase rights to 2,448,000 and 2,668,000 shares of unvested restricted stock awards issued pursuant to stock purchase agreements at no cost per share as of December 31, 2010 and 2009, respectively. Total employee stock-based compensation expense for restricted stock awards was \$405,000 and \$346,000 for the years ended December 31, 2010 and 2009, respectively.

During the year ended December 31, 2010, the Company issued 333,333 shares of restricted stock units with no exercise price to non-employee members of its Board of Directors. The units will vest on the earlier of either a change in control of the Company or upon the grantee's termination of service as a Board member. In 2010, the non-employee members of the Board of Directors elected to forego all or a portion of their cash compensation in lieu of the

aforementioned restricted stock unit grants and restricted stock awards.

***Employee Stock Purchase Plan***

Employees generally are eligible to participate in the Employee Stock Purchase Plan ( ESPP ) if they have been continuously employed by the Company for at least 10 days prior to the first day of the offering period and are customarily employed at least 20 hours per week and at least five months per calendar year and are not a 5% or greater shareholder. Shares may be purchased under the ESPP at 85% of the lesser of the fair market value of the common stock on the grant date or purchase date. Employee contributions, through payroll deductions, are limited to the lesser of 15% of earnings or \$25,000.

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As of December 31, 2010, a total of 1,979,990 shares had been issued under the ESPP. In April 2008, the Company's Board of Directors amended, and in May 2008 the Company's shareholder approved, the amendment to the ESPP increasing the shares of common stock authorized by 1,000,000. In April 2009, the Company's Board of Directors amended, and in May 2009 the Company's shareholders approved, the amendment to the ESPP increasing the number of shares of common stock authorized by 2,500,000. As of December 31, 2010, there was a balance of 2,570,010 available authorized shares. Compensation expense was \$63,000 and \$55,000 for the years ended December 31, 2010 and 2009, respectively. The fair value of employee stock purchase rights under the ESPP is determined using the Black-Scholes option pricing model and the following weighted average assumptions:

	<b>Years Ended December 31,</b>	
	<b>2010</b>	<b>2009</b>
<b>Employee Stock Purchase Plan</b>		
Dividend yield	0.0%	0.0%
Volatility factor	136.0%	115.4%
Risk-free interest rate	1.0%	0.9%
Expected life (years)	2.00	2.00
Weighted-average fair value of purchase rights granted during the period	\$ 0.12	\$ 0.11

***Stock-Based Compensation Expense***

The Company adopted the fair value recognition provisions of SFAS No. 123(R), *Share-based Payment*, (now referred to as ASC 718) effective January 1, 2006. Stock-based compensation expense is based on the fair value of that portion of stock options and restricted stock awards that are ultimately expected to vest during the period. Stock-based compensation expense recognized in the statement of operations during 2010 and 2009 included compensation expense for stock-based awards granted prior to, but not yet vested, as of December 31, 2005, based on the grant date fair value estimated in accordance with the pro forma provisions of SFAS 123, and share-based payment awards granted subsequent to December 31, 2005 based on the grant date fair value estimated in accordance with SFAS 123(R). For stock options granted after January 1, 2006, the fair value of each award is amortized using the straight-line single-option method. For share awards granted prior to 2006, the fair value of each award was amortized using the accelerated multiple-option valuation method prescribed by SFAS 123(R). Stock-based compensation expense is based on awards ultimately expected to vest, therefore, it has been reduced for estimated forfeitures. The Company's estimated forfeiture rate is based on historical experience.

The following table shows stock-based compensation expense included in the statement of operations for the years ended December 31, 2010 and 2009, respectively (in thousands, except per share amounts):

	<b>2010</b>	<b>2009</b>
<b>Costs and Expenses</b>		
Research and development	\$ 218	\$ 305
General and administrative	641	568

Total stock-based employee compensation expense	\$ 859	\$ 873
Impact on basic and diluted net loss per common share	\$ (0.01)	\$ (0.01)

There was no capitalized stock-based compensation cost as of December 31, 2010. Since the Company has cumulative net losses through December 31, 2010, there was no tax benefit associated with stock-based compensation expense.

The total amount of unrecognized compensation cost related to non-vested stock options and stock purchases net of forfeitures, was \$361,000 as of December 31, 2010. This amount will be recognized over a weighted average



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period of 1.50 years. As of December 31, 2010, \$299,000 of total unrecognized compensation costs, net of forfeitures, related to non-vested awards is expected to be recognized over a weighted average period of 0.92 years.

***Valuation Assumptions***

The fair value of options was estimated at the date of grant using the Black-Scholes option pricing model. Expected volatility is based on the historical volatility of the Company's common stock for similar terms. The expected term was estimated using a lattice model prior to 2010, and the simplified method was used in 2010 as allowed in SAB No. 110, since the Company's recent exercise and forfeiture history was not representative of the expected term of options granted during the year. The expected term represents the estimated period of time that stock options are expected to be outstanding, which is less than the contractual term which is generally ten years. The risk-free interest rate is based on the U.S. Treasury yield. The expected dividend yield is zero, as the Company does not anticipate paying dividends in the near future. The weighted average assumptions for employee and non-employee options are as follows:

	<b>Years Ended December 31</b>	
	<b>2010</b>	<b>2009</b>
Dividend yield	0.0%	0.0%
Volatility factor	98.7%	91.6%
Risk-free interest rate	1.7%	1.3%
Expected term (years)	5.5	3.7
Weighted-average fair value of options granted during the periods	\$ 0.13	\$ 0.14

***Stock-Based Compensation for Non-Employees***

The Company accounts for options issued to non-employees under ASC 505-50, *Equity - Equity Based Payments to Non-Employees*, using the Black-Scholes option-pricing model. The value of such non-employee options are periodically re-measured over their vesting terms.

**10. Collaborations and Royalty Agreements****Lung Rx**

On August 30, 2007, the Company signed an Exclusive License, Development and Commercialization Agreement (the Lung Rx Agreement) with Lung Rx, Inc., (Lung Rx), a wholly-owned subsidiary of United Therapeutics Corporation, pursuant to which the Company granted Lung Rx, upon the payment of specified amounts, an exclusive license to develop and commercialize inhaled treprostinil using the Company's AERx Essence technology for the treatment of pulmonary arterial hypertension and other potential therapeutic indications. The Company determined that the Lung Rx collaboration agreement, since it was comprised of multiple deliverables without standalone value, should be treated as a single unit of accounting. The Company has received a total of \$4.9 million in milestone, development and other payments under this agreement. Up until the quarter ended September 30, 2009, the Company had not recognized any revenue under the Lung Rx Agreement due to the existence of certain undelivered performance obligations.

On June 1, 2009, the Company received a written notice from United Therapeutics Corporation seeking to terminate the Lung Rx Agreement on July 1, 2009. During the three months ended September 30, 2009, the Company engaged Lung Rx in discussions about continuing or restructuring its collaboration with Lung Rx. These discussions were not successful and the Company concluded that the likelihood of further collaboration with Lung Rx was remote. Therefore, during the three months ended September 30, 2009, the Company recognized \$4.9 million of revenue relating to the Lung Rx Agreement that had been previously deferred. In accordance

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

with the Company's revenue recognition policy, all amounts were recognized as revenue in the quarter ended September 30, 2009 since the Company no longer had any performance obligations under the Lung Rx Agreement.

***Zogenix***

In August 2006, the Company sold all of its assets related to the Intraject needle-free injector technology platform and products, including 12 United States patents along with foreign counterparts, to Zogenix, Inc. Zogenix is responsible for further development and commercialization efforts of Intraject (now rebranded under the name DosePro). Under the terms of the asset sale agreement, the Company received a \$4.0 million initial payment from Zogenix and was entitled to a \$4.0 million milestone payment upon initial U.S. commercialization, as well as royalty payments upon commercialization of DosePro products. In December 2007, Zogenix submitted a New Drug Application ( NDA ) with the U.S. Food and Drug Administration ( FDA ) for the migraine drug sumatriptan using the needle-free injector DosePro ( SUMAVEL DosePro ). In March 2008, Zogenix entered into a license agreement to grant exclusive rights in the European Union to Desitin Pharmaceuticals, GmbH to develop and commercialize SUMAVEL DosePro in the European Union. On July 16, 2009, Zogenix announced that it had received approval from the FDA for its NDA for SUMAVEL DosePro needle-free delivery system. On August 3, 2009, Zogenix and Astellas Pharma US, Inc. announced that they had entered into an exclusive co-promotion agreement in the U.S. for the SUMAVEL DosePro needle-free delivery system. Under the announced terms of the agreement, the companies will collaborate on the promotion and marketing of SUMAVEL DosePro with Zogenix focusing their sales activities primarily on the neurology market while Astellas will focus mostly on primary care physicians. Zogenix will have responsibility for manufacturing and distribution of the product.

The Company received from Zogenix a milestone payment of \$4.0 million in the three months ended March 31, 2010 and received recurring royalty payments totaling \$0.4 million during the last half of the year ending December 31, 2010.

**11. Asset Impairment**

In accordance with U.S. GAAP, the Company reviews for impairment whenever events or changes in circumstances indicate that the carrying amount of assets may not be recoverable. For the quarter ended September 30, 2009, the Company concluded that the termination of the Lung Rx Agreement and the subsequent suspension of development activities warranted reviewing AERx technology assets for impairment. The Company determined that the production equipment used to manufacture the AERx product constituted an asset group that should be reviewed for impairment. These assets are presently idle and primarily consist of customized AERx production equipment that does not have an active resale market due to the specialized nature of the assets. The Company determined that the net book value of these assets exceeded the expected future cash flows.

Accordingly, the Company recorded an impairment charge of \$1.6 million to write down the assets to their estimated fair value. The Company recorded this charge as a component of restructuring and asset impairment on its statement of operations. In addition, the Company recorded \$0.3 million in restructuring and asset impairment expense related to lease exit activities.

**12. Employee Benefit Plans**

The Company provides a 401(k) Plan for all full-time employees. Employees can contribute on a pretax basis up to the 2010 statutory limit of \$16,500 (plus an additional \$5,500 for employees that are 50 years and older). The Company matches employees' contributions on 50% of the first 6% of an employee's contribution. The Company's employer matching contribution expense was \$35,000 and \$62,000 in 2010 and 2009, respectively.

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Table of Contents**ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)****13. Income Taxes**

In 2010 and 2009, the Company recorded an income tax benefit of zero and \$15,000, respectively. The income tax benefits were a result of the refundable research and development credit that was enacted in 2008. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for tax purposes as well as net operating loss and tax credit carryforwards.

Significant components of the Company's deferred tax assets and liabilities were as follows (in thousands):

	<b>December 31,</b>	
	<b>2010</b>	<b>2009</b>
Net operating loss carryforwards	\$ 9,114	\$ 7,962
Research and development credits	6,461	6,389
Federal orphan drug credits	3,801	3,360
Debt extinguishment	(1,149)	
Other	1,922	1,818
Total deferred tax assets	20,149	19,529
Valuation allowance	(20,149)	(19,529)
Net deferred tax assets	\$	\$

The Company considers all available evidence, both positive and negative, including historical levels of taxable income, expectations and risks associated with estimates of future taxable income, and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. At December 31, 2010 and 2009, based on the Company's analysis of all available evidence, both positive and negative, it was considered more likely than not that the Company's deferred tax assets would not be realized, and as a result, the Company recorded a valuation allowance for its deferred tax assets. The valuation allowance increased by \$0.6 million during the year ended December 31, 2010 and increased by \$7.6 million during the year ended December 31, 2009. In accordance with ASC 718 *Compensation-Stock Compensation*, the Company has excluded from deferred tax assets those tax benefits attributable to employee stock option exercises.

The difference between the income tax benefit and the amount computed by applying the federal statutory income tax rate to loss before income taxes is as follows (in thousands):

	<b>Year Ended</b>	
	<b>December 31,</b>	
	<b>2010</b>	<b>2009</b>
Income tax benefit at federal statutory rate	\$ (1,882)	\$ (4,825)
Expired net operating losses	65	11

State taxes (net of federal)	(116)	(847)
Credits	(2,621)	(2,408)
Other	85	425
Reduction in deferred tax assets due to Section 382 limitations	3,849	
Change in valuation allowance	620	7,629
Total	\$	\$ (15)

As of December 31, 2010, the Company had federal net operating loss carryforwards of approximately \$22.5 million, federal research and development tax credit carryforwards of approximately \$0.1 million and federal orphan drug credit carryforwards of approximately \$3.8 million, which expire in the years 2011 through 2030. The

**Table of Contents****ARADIGM CORPORATION****NOTES TO FINANCIAL STATEMENTS (Continued)**

Company also had California net operating loss carryforwards of approximately \$21.5 million, which expire in the years 2011 through 2030, and California research and development tax credit carryforwards of approximately \$9.8 million, which do not expire. None of the federal and state net operating loss carryforwards represent stock option deductions arising from activity under the Company's stock option plan.

The Company's federal and state net operating loss (NOLs) and tax credit carryforwards are subject to substantial annual limitations as a result of certain ownership changes that occurred in 2010 and prior years. Federal net operating loss (NOL) carryforwards totaling \$22.5 million will be available from 2011 to 2028, subject to the annual limitations. Federal tax credit carryforwards totaling \$2.8 million will be available from 2021 to 2030, subject to the annual limitations. State operating loss carryforwards totaling \$21.5 million will be available from 2012 to 2030, subject to the annual limitations. State tax credit carryforwards totaling \$9.8 million will be available commencing in 2031. The Company's use of its net operating loss and credit carryforwards may be subject to further annual limitations for ownership changes occurring after December 31, 2010. The annual limitations or any future limitations could result in the expiration of the net operating loss and credit carryforwards before utilization.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is subject to U.S. federal and state income tax examinations by tax authorities for tax years 1995 through 2009 due to net operating losses that are being carried forward for tax purposes.

The Company does not have any unrecognized tax benefits, or interest and penalties accrued on unrecognized tax benefits, at December 31, 2010, or during the two years then ended. The Company's policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense.

**14. Quarterly Results of Operations (unaudited)**

Following is a summary of the quarterly results of operations for the years ended December 31, 2010 and 2009 (in thousands, except per share amounts):

	<b>March 31, 2010</b>	<b>June 30, 2010</b>	<b>September 30, 2010</b>	<b>December 31, 2010</b>
Total revenue	\$ 4,000	\$	\$ 239	\$ 144
Operating expenses:				
Research and development	2,837	2,736	2,403	2,234
General and administrative	1,253	1,382	895	955
Restructuring and asset impairment	13	13	11	11
Total expenses	4,103	4,131	3,309	3,200
Loss from operations	(103)	(4,131)	(3,070)	(3,056)
Net interest expense	(99)	(105)	(92)	(2)
Other income (expense), including extinguishment of debt	(2)	108	4,477	696

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Loss before income taxes	(204)	(4,128)	1,315	(2,362)
Income tax benefit (provision)				
Net income (loss)	\$ (204)	\$ (4,128)	\$ 1,315	\$ (2,362)
Basic and diluted net income (loss) per common share	\$ (0.00)	\$ (0.04)	\$ 0.01	\$ (0.01)
Shares used in computing basic net loss per common share	99,872	104,891	139,167	169,824
Shares used in computing diluted net loss per common share	99,872	104,891	140,177	169,824

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	<b>March 31, 2009</b>	<b>June 30, 2009</b>	<b>September 30, 2009</b>	<b>December 31, 2009</b>
Total revenues	\$	\$	\$ 4,883	\$
Operating expenses:				
Research and development	3,726	2,927	2,426	2,327
General and administrative	1,398	1,368	1,323	941
Restructuring and asset impairment	17	205	1,638	14
Total expenses	5,141	4,500	5,387	3,282
Loss from operations	(5,141)	(4,500)	(504)	(3,282)
Net interest expense	(76)	(91)	(93)	(96)
Other income (expense)	(1)	(3)	1	(1)
Loss before income taxes	( 5,218)	(4,594)	(596)	(3,379)
Income tax benefit				15
Net loss	\$ (5,218)	\$ (4,594)	\$ (596)	\$ (3,364)
Basic and diluted net loss per common share	\$ (0.07)	\$ (0.05)	\$ (0.01)	\$ (0.03)
Shares used in computing basic and diluted net loss per common share	70,704	99,298	99,347	99,648

**15. Subsequent Events*****June 2011 Royalty Financing***

On June 21, 2011, the Company entered into an \$8.5 million royalty financing agreement with a syndicate of lenders. The agreement created a debt obligation (the Term Loan) that will be repaid through and secured by royalties from net sales of the SUMAVEL DosePro (sumatriptan injection) needle-free delivery system payable to the Company under its Asset Purchase Agreement (APA) with Zogenix.

Under the terms of the royalty financing agreement, the Company received a loan of \$8.5 million, less fees, transaction and legal expenses (estimated to be approximately \$400,000) and an additional \$250,000 set aside for an Interest Reserve Account. The lenders will be entitled to receive 100% of all royalties payable to the Company under the APA until the principal and accrued interest of the Term Loan are fully repaid, after which time the benefit of any further royalties made under the APA will accrue to Aradigm. The Term Loan will accrue interest at the rate equal to the greater of a) LIBOR or b) one-and-a-half percent (1.50%), plus a margin of fourteen-and-a-half percent (14.5%). To the extent royalty payments are insufficient to pay accrued and unpaid interest under the financing, the shortfall will be funded from the Interest Reserve Account or, if the account is insufficient to pay all of the interest due, the

shortfall will be capitalized and added to the principal balance of the Term Loan. The lenders were granted a security interest in the assets of an Aradigm subsidiary, Aradigm Royalty Financing LLC, which holds Aradigm's rights to receive royalty payments under the APA. The lenders have no recourse to other assets of Aradigm for repayment of the loan. Amortization of the Term Loan will occur to the extent that royalties payments received for any quarter exceed accrued interest due for that quarter.

The Company has the right to prepay the Term Loan after June 21, 2012, subject to the payment of the principal balance plus a prepayment fee of eight percent (8%) of the outstanding balance if prepaid in months 13-24 following the transaction closing date of June 21, 2011; four percent (4%) if prepaid in months 25-36; and two percent (2%) if prepaid in months 37-48. There will be no prepayment fee for prepaying the Term Loan after the forty-eight (48) month anniversary of the closing date. In addition, the Company has the right to make partial prepayments in an amount no less than the greater of (i) ten percent (10%) of the principal balance of the Term Loan outstanding as of

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**ARADIGM CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

the applicable prepayment date or (ii) \$1,000,000. Under no circumstances will the receipt of royalty payments from Zogenix in excess of the accrued interest then due be considered prepayments under the Term Loan.

In connection with the Transaction, Aradigm issued to the lenders warrants to purchase a total of 2,840,909 shares of Aradigm common stock at a strike price of \$0.22 per share, representing a 20% premium above the average closing price of Aradigm common stock for the ten trading days immediately preceding the closing of the Transaction. The warrants expire on December 31, 2016. The \$0.4 million calculated fair value of the warrants, as well as the \$250,000 that was established as the Interest Reserve Account, were recorded in prepaid and other current assets. In accordance with Accounting Standards Topic 470 *Debt*, the Company also recorded \$473,000 of loan costs which were capitalized and recorded in other assets. The fair value of the warrants and the capitalized loan costs will be amortized over a four year period.

***July 2011 Private Placement***

On July 5, 2011, the Company entered into a definitive agreement for the sale of common stock to three existing shareholders, including accounts managed by First Eagle Investment Management LLC and Tavistock Life Sciences, in a private placement for aggregate gross proceeds of \$4.75 million. The closing of the private placement occurred on July 7, 2011. Under the terms of the agreement, the Company agreed to sell an aggregate of 25,000,000 shares of common stock at a price of \$0.19 per share. After deducting for fees and expenses, the net proceeds from the sale of the shares of common stock are anticipated to be approximately \$4.4 million. The Company will be required, among other things, to file a resale registration statement within 30 days following the closing that covers the resale by the purchasers of the shares.

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**Aradigm Corporation**

**Up to 68,229,726 shares of Common Stock**

**PROSPECTUS**

**August 16, 2011**

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus or any prospectus supplement. This prospectus is not an offer of these securities in any jurisdiction where an offer and sale is not permitted.