PRO PHARMACEUTICALS INC
Form POS AM
April 09, 2010
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As filed with the Securities and Exchange Commission on April 9, 2010

Registration No. 333-150898

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Post-Effective Amendment No. 3

on

FORM S-1

to

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

PRO-PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Nevada	**2834**	**04-3562325**
(State or other jurisdiction of incorporation or organization)	**(Primary SIC Number)**	**(I.R.S. Employer Identification No.)**

7 Wells Avenue

Newton, Massachusetts 02459

(617) 559-0033

(Address, including zip code, and telephone number, including area code, of principal executive offices)

Theodore D. Zucconi, Ph.D.

Chief Executive Officer and President

Pro-Pharmaceuticals, Inc.

7 Wells Avenue

Newton, Massachusetts 02459

(617) 559-0033

(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a copy to:

Adam D. Eilenberg, Esq.

Eilenberg & Krause LLP

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New York, New York 10017

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If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. x

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer	¨	Accelerated filer	¨
Non-accelerated filer	¨ (Do not check if a smaller reporting company)	Smaller reporting company	x

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

Pursuant to Rule 401(b) under the Securities Act of 1933, and in order to comply with Section 10(a)(3) of the Securities Act, the Registrant is filing this Post-Effective Amendment on Form S-1 because it is currently ineligible to file a registration statement on Form S-3. Pursuant to Rule 429 under the Securities Act, the prospectus contained in this Post-Effective Amendment on Form S-1 shall serve as a combined prospectus that also relates to, and this Post-Effective Amendment on Form S-1 shall act, upon effectiveness, as a post-effective amendment to, the Registrant s previous Registration Statement on Form S-3, Registration No. 333-148911.

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EXPLANATORY NOTE

The prospectus contained in this registration statement serves as a combined prospectus relating to two previously filed registration statements. Alternate versions of certain pages of the prospectus relating to registration statement No. 333-150898 appear following page F-39, and serve as replacement pages to form the prospectus relating to registration statement No. 333-148911 as follows: page A-1 replaces the prospectus cover page; page A-2 replaces page 3; and page A-3 replaces pages 12-17.

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The information in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and the selling stockholders are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

Subject To Completion, Dated April 9, 2010

PROSPECTUS

15,836,106 Shares of Common Stock

This prospectus covers the offer and sale of up to 15,836,106 shares of our common stock from time to time by certain selling stockholders named in this prospectus. The shares of common stock being offered are issuable upon the exercise of outstanding warrants or the conversion of outstanding shares of Series A 12% Convertible Preferred Stock.

We are not offering any shares of common stock.

The selling stockholders will receive all of the net proceeds from sales of the common stock covered by this prospectus and will pay all underwriting discounts and selling commissions, if any, applicable to those sales. We will not receive any proceeds from sales of any of these shares. However, we will receive the exercise price of the warrants to the extent they are not exercised on a net or cashless exercise basis.

The selling stockholders may periodically sell the shares directly or through agents, underwriters or dealers. The shares may be sold:

in the over-the-counter market, in privately negotiated transactions or otherwise;

directly to purchasers or through agents, brokers, dealers or underwriters; and

at market prices prevailing at the time of sale, at prices related to the prevailing market prices, or at negotiated prices.

If required, each time a selling stockholder sells shares of common stock, we will provide a prospectus supplement that will contain specific information about the terms of that transaction. We urge you to carefully read this prospectus and any accompanying prospectus supplement before you make an investment decision.

Investing in our securities involves a high degree of risk. As a result of our current lack of financial liquidity and negative stockholders equity, our auditors have expressed substantial concern about our ability to continue as a going concern. You should purchase these securities only if you can afford a complete loss of your investment. See Risk Factors beginning on page 4 of this prospectus.

Neither the U.S. 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 [ ], 2010

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ABOUT THIS PROSPECTUS

Unless the context otherwise requires, all references to Pro-Pharmaceuticals, we, us, our, our company, or the Company in this prospectus to Pro-Pharmaceuticals, Inc., a Nevada corporation, and its subsidiaries, and their respective predecessor entities for the applicable periods, considered as a single enterprise.

You should rely only on the information contained in this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. For further information, please see the section of this prospectus entitled Where You Can Find More Information. The selling stockholders are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

You should not assume that the information appearing in this prospectus is accurate as of any date other than the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

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PROSPECTUS SUMMARY

This summary highlights important features of this offering and the information included in this prospectus. This summary does not contain all of the information that you should consider before investing in our securities. You should read this prospectus carefully as it contains important information you should consider when making your investment decision. See Risk Factors beginning on page 4.

About Pro-Pharmaceuticals, Inc.

We are a development-stage company engaged in the discovery and development of therapeutics that target Galectin receptors that we believe enhance existing cancer treatments and could also be used in the treatment of liver, microbial and inflammatory diseases. All of our products are presently in development, including pre-clinical and clinical trials.

Since our inception on July 10, 2000, our primary focus has been the development of a new generation of anti-cancer treatments using polysaccharide polymers which are aimed at increasing survival and improving the quality of life for cancer patients. Our lead product candidate, DAVANAT®, is a patented new chemical entity that we believe, when administered in combination with chemotherapy, increases the efficacy while reducing adverse side effects of the chemotherapy. We hold the patent on DAVANAT®, which was invented by company founders David Platt, Ph.D., our former Chief Executive Officer, and Anatole Klyosov, Ph.D., our Chief Scientist.

In 2002, the Federal Drug Administration (FDA) granted us an Investigational New Drug application (IND), for use of DAVANAT® in combination with 5-fluorouracil (5-FU), to treat late-stage cancer patients with solid tumors. 5-FU is FDA-approved and one of the most widely used chemotherapies for treatment of various types of cancer, including colorectal, breast and gastrointestinal. In September 2008, we submitted a clinical and pre-clinical package to the FDA in support of our DAVANAT® New Drug Application (NDA). The FDA reported to us in its minutes for the December 2008 meeting that we will be required to conduct a Phase III trial to demonstrate superiority to the best standard of care for late stage colorectal cancer patients. We believe that using DAVANAT® in combination with 5-FU enables greater absorption of the chemotherapy in cancer cells while reducing its toxic side effects.

We plan to submit an NDA for co-administration of DAVANAT® with 5-FU for the indication of colorectal cancer.

We were incorporated under Nevada law on January 26, 2001 and in May of that year acquired a Massachusetts corporation (organized on July 10, 2000) engaged in the business we now undertake. We have a wholly-owned Delaware subsidiary that we formed in 2003 to hold our cash and cash equivalents. We also own 10% of a Nevada subsidiary that we formed in October 2008 for the development of our technology in cardiovascular treatments.

Principal Executive Offices

Our principal executive offices are located at 7 Wells Avenue, Newton, Massachusetts 02459. Our telephone number is (617) 559-0033, fax number is (617) 928-3450 and our website address is www.pro-pharmaceuticals.com. The information on our website is not incorporated by reference into this prospectus and should not be relied upon with respect to this offering.

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The Offering

Securities Offered	15,836,106 shares of our common stock offered by selling stockholders
Use of Proceeds	We will not receive any proceeds from the sale of shares by the selling stockholders. To the extent that the warrants are exercised by the selling stockholders for cash, rather than by cashless exercise, we will receive proceeds constituting the exercise price of such warrants. Any such proceeds received by us through warrant exercises will be used for working capital.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference contain, in addition to historical information, forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements relate to future events or our future financial performance and can be identified by the use of forward-looking terminology such as may, could, expect, anticipate, estimate, continue or other similar words. These forward-looking statements are based on management s current expectations and are subject to a number of factors and uncertainties which could cause actual results to differ materially from those described in these statements. We caution investors that actual results or business conditions may differ materially from those projected or suggested in forward-looking statements as a result of various factors including, but not limited to, those described in, or incorporated by reference into, the Risk Factors section of this prospectus. We cannot assure you that we have identified all the factors that create uncertainties. Readers should not place undue reliance on forward-looking statements. We undertake no obligation to publicly release the result of any revision of these forward-looking statements to reflect events or circumstances after the date they are made or to reflect the occurrence of unanticipated events.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the risks described below and the other information before deciding to invest in our common stock. The risks described below are not the only ones facing our company. Additional risks not presently known to us or that we currently consider immaterial may also adversely affect our business. We have attempted to identify below the major factors that could cause differences between actual and planned or expected results, but we cannot assure you that we have identified all of those factors.

If any of the following risks actually happen, our business, financial condition and operating results could be materially adversely affected. In this case, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to Our Company

We are at an early stage of development and have not generated any revenue.

We are a development-stage company with a limited operating history, and we have not generated any revenues to date. We have no products available for sale, and none are expected to be commercially available for several years, if at all. We may never obtain FDA approval of our products in development and, even if we do so and are also able to commercialize our products, we may never generate revenue sufficient to become profitable. Our failure to generate revenue and profit would likely lead to loss of your investment in our company.

We have incurred net losses to date and must raise additional capital by the end of April 2010 in order to continue to operate.

We have identified and disclosed in Note 1 to our consolidated financial statements a number of factors that raise substantial doubt about our ability to continue as a going concern and the report of our independent registered public accounting firm on our financial statements included in our annual report on Form 10-K contains an explanatory paragraph regarding going-concern uncertainty. The accompanying financial statements do not include any adjustments or charges that might be necessary should we be unable to continue as a going concern, such as charges related to impairment of our assets, the recoverability and classification of assets or the amounts and classification of liabilities or other similar adjustments. If we are not able to continue as a going concern, it is likely that investors will lose all or a part of their investment.

We have incurred net losses in each year of operation since our inception in July 2000. Our accumulated deficit as of December 31, 2009 was $47.7 million. We will need to continue to conduct significant research, development, testing and regulatory compliance activities that, together with projected general and administrative expenses, we expect will result in substantial operating losses for the next several years. Accordingly, we do not expect to be generating sales or other revenue and will remain dependent on outside sources of financing during that time. If we are unable to raise funds from outside sources for our continuing operations, we may be adversely affected.

We may raise capital through public or private equity financings, partnerships, debt financings, bank borrowings, or other sources. Additional funding may not be available on favorable terms or at all. If adequate funds are not otherwise available, we may need to significantly curtail operations. To obtain additional funding, we may need to enter into arrangements that require us to relinquish rights to certain technologies, products and/or potential markets. To the extent that additional capital is raised through the sale of equity, or securities convertible into equity, our equity holders may experience dilution of their proportionate ownership of the company.

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Based on $251,000 of unrestricted cash as of December 31, 2009, combined with $308,000 and $322,000, net, respectively, received from offerings of our Series B-2 financings on January 29 and March 8, 2010, we believe that we have sufficient cash to meet our financial and operating obligations into April 2010. We will require more cash to fund our operations and believe that we will be able to obtain additional financing. However, there can be no assurance that we will be successful in obtaining such new financing or, if available, that such financing will be obtainable on terms favorable to us. We have taken steps to reduce our administrative and clinical spending, however, we must raise additional cash by the end of April 2010, or we may not be able to continue operations and may be forced to seek bankruptcy protection.

We were a counterclaim defendant in a lawsuit instituted by our former Chief Executive Officer that relates to certain of our intellectual property.

In January 2004, David Platt, Ph.D., our former Chairman and Chief Executive Officer, filed a lawsuit in Massachusetts Superior Court against GlycoGenesys, Inc., which asserted counterclaims against us related to our intellectual property. Prospect Therapeutics, Inc. subsequently purchased certain assets including this lawsuit from the GlycoGenesys bankruptcy estate. Before the Court could issue a decision after the lawsuit went to trial in March 2009, Prospect Therapeutics announced on May 15, 2009, that it had assigned all of its assets for the benefit of creditors and would liquidate. In response, we moved to dismiss the lawsuit on various grounds, including failure to prosecute. Prospect s assets, including the lawsuit, were sold at auction on June 29, 2009, and the new owner of the assets elected not to prosecute. After a post-trial hearing, the Court issued a judgment dated July 17, 2009, dismissing the lawsuit against us and Dr. Platt.

We are involved in litigation with Summer Street Research Partners.

On January 30, 2008, Custom Equity Research, Incorporated (d/b/a Summer Street Research Partners) filed a lawsuit against us in the Superior Court of the Commonwealth of Massachusetts, alleging claims for breach of contract, declaratory judgment and unjust enrichment arising out of an engagement letter under which Summer Street agreed to provide institutional investment placement services to us. Summer Street claims it is entitled to a placement fee for each placement made during the term of the agreement and for each issuance of securities made or agreed to be made by us from October 17, 2007 through November 16, 2008. We initially responded to the lawsuit with a motion to dismiss, which the Court denied on June 23, 2008, finding that the letter agreement was ambiguous with respect to Summer Street s entitlement to compensation. The Court also denied Summer Street s motion for a pre-judgment attachment and trustee process, preliminarily finding that Summer Street was not likely to prevail on any of its claims. On July 3, 2008, we filed our answer, denying Summer Street s material allegations. The parties are currently engaged in discovery and no trial date has been set for this matter. We believe the lawsuit is without merit and intend to contest it vigorously. However, if we were to receive an adverse decision, we might be required to pay cash damages to Summer Street which could have a material adverse effect on our financial position.

Our drug candidates are based on novel unproven technologies.

Our drug candidates in development are based on novel unproven technologies using proprietary compounds in combination with FDA approved drugs currently used in the treatment of cancer and other diseases. Therapeutics that target Galectin receptors are difficult to synthesize and we may not be able to synthesize them in a way that would make them usable as target delivery vehicles for the anti-cancer drugs.

We have one drug candidate in clinical trials and results are uncertain.

We have one product candidate in human clinical trials. Pre-clinical results in animal studies are not necessarily predictive of outcomes in human clinical trials. Clinical trials are expensive, time-consuming and may not be successful. They involve the testing of potential therapeutic agents, or effective treatments, in humans, typically in three phases, to determine the safety and efficacy of the product candidates necessary for an approved drug. Many products in human clinical trials fail to demonstrate the desired safety and efficacy characteristics. Even if our products progress successfully through initial human testing, they may fail in later stages of development. We may engage others to conduct our clinical trials, including clinical research organizations and, possibly, government-sponsored agencies. These trials may not start or be completed as we forecast, or may not achieve desired results.

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We may be unable to commercialize our product candidates.

Even if our current and anticipated product candidates achieve positive results in clinical trials, we may be unable to commercialize them. Potential products may fail to receive necessary regulatory approvals, be difficult to manufacture on a large scale, be uneconomical to produce, fail to achieve market acceptance, or be precluded from commercialization by proprietary rights of third parties. Our inability to commercialize out products would substantially impair the viability of our company.

Our lack of operating experience may cause us difficulty in managing our growth.

We have limited experience in manufacturing or procuring products in commercial quantities, conducting other later-stage phases of the regulatory approval process, selling pharmaceutical products, or negotiating, establishing and maintaining strategic relationships. Any growth of our company will require us to expand our management and our operational and financial systems and controls. If we are unable to do so, our business and financial condition would be materially harmed. If rapid growth occurs, it may strain our operational, managerial and financial resources.

We will depend on third parties to manufacture and market our products and to design trial protocols, arrange for and monitor the clinical trials, and collect and analyze data.

We do not have, and do not now intend to develop, facilities for the manufacture of any of our products for clinical or commercial production. In addition, we are not a party to any long-term agreement with any of our suppliers, and accordingly, we have our products manufactured on a purchase-order basis from one of two primary suppliers. We will need to develop relationships with manufacturers and enter into collaborative arrangements with licensees or have others manufacture our products on a contract basis. We expect to depend on such collaborators to supply us with products manufactured in compliance with standards imposed by the FDA and foreign regulators.

In addition, we have limited experience in marketing, sales or distribution, and we do not intend to develop a sales and marketing infrastructure to commercialize our pharmaceutical products. If we develop commercial products, we will need to rely on licensees, collaborators, joint venture partners or independent distributors to market and sell those products.

Moreover, as we develop products eligible for clinical trials, we may contract with independent parties to design the trial protocols, arrange for and monitor the clinical trials, collect data and analyze data. In addition, certain clinical trials for our products may be conducted by government-sponsored agencies and will be dependent on governmental participation and funding. Our dependence on independent parties and clinical sites involves risks including reduced control over the timing and other aspects of our clinical trials.

We are exposed to product liability, pre-clinical and clinical liability risks which could place a substantial financial burden upon us, should we be sued, because we do not currently have product liability insurance above and beyond our general insurance coverage.

Our business exposes us to potential product liability and other liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical formulations and products, as a result of which claims may be asserted against us. In addition, the use in our clinical trials of pharmaceutical formulations and products that our potential collaborators may develop and the subsequent sale of these formulations or products by us or our potential collaborators may cause us to bear a portion of or all product liability risks. A successful liability claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations.

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Since we do not currently have any FDA-approved products or formulations, we do not currently have any product liability insurance covering commercialized products. We may not be able to obtain or maintain adequate product liability insurance on acceptable terms, if at all, or such insurance may not provide adequate coverage against our potential liabilities. Furthermore, our current and potential partners with whom we have collaborative agreements or our future licensees may not be willing to indemnify us against these types of liabilities and may not themselves be sufficiently insured or have sufficient liquidity to satisfy any product liability claims. Claims or losses in excess of any product liability insurance coverage that may be obtained by us could have a material adverse effect on our business, financial condition and results of operations.

If users of our proposed products are unable to obtain adequate reimbursement from third-party payers, or if new restrictive legislation is adopted, market acceptance of our proposed products may be limited and we may not achieve revenues.

The continuing efforts of government and insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of health care may affect our future revenues and profitability, and the future revenues and profitability of our potential customers, suppliers and collaborative partners and the availability of capital. For example, in certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control. In the U.S., given recent federal and state government initiatives directed at lowering the total cost of health care, the U.S. Congress and state legislatures will likely continue to focus on health care reform, the cost of prescription pharmaceuticals and on the reform of the Medicare and Medicaid systems. While we cannot predict whether any such legislative or regulatory proposals will be adopted, the announcement or adoption of such proposals could materially harm our business, financial condition and results of operations.

Our ability to commercialize our proposed products will depend in part on the extent to which appropriate reimbursement levels for the cost of our proposed formulations and products and related treatments are obtained by governmental authorities, private health insurers and other organizations, such as health management organizations, or HMOs. Third-party payers are increasingly challenging the prices charged for medical drugs and services. Also, the trend toward managed health care in the U.S. and the concurrent growth of organizations such as HMOs, which could control or significantly influence the purchase of health care services and drugs, as well as legislative proposals to reform health care or reduce government insurance programs, may all result in lower prices for or rejection of our products.

There are risks associated with our reliance on third parties for marketing, sales, managed care and distribution infrastructure and channels.

We expect that we will be required to enter into agreements with commercial partners to engage in sales, marketing and distribution efforts around our products in development. We may be unable to establish or maintain third-party relationships on a commercially reasonable basis, if at all. In addition, these third parties may have similar or more established relationships with our competitors. If we do not enter into relationships with third parties for the sales and marketing of our proposed products, we will need to develop our own sales and marketing capabilities.

We may be unable to engage qualified distributors. Even if engaged, these distributors may:

- fail to satisfy financial or contractual obligations to us;
- fail to adequately market our products;
- cease operations with little or no notice to us; or
- offer, design, manufacture or promote competing formulations or products.

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If we fail to develop sales, managed care, marketing and distribution channels, we would experience delays in generating sales and incur increased costs, which would harm our financial results.

We depend on key individuals to develop our products and pursue collaborations.

We are highly dependent on Anatole Klyosov, Ph.D., our Chief Scientist who has scientific technical or other business expertise and experience that is critical to our success. The loss of Dr. Klyosov, or failure to attract or retain other key personnel, could prevent us from pursuing collaborations or developing our products and core technologies.

Risks Related to the Drug Development Industry

We will need regulatory approvals to commercialize our products.

We are required to obtain approval from the FDA in order to sell our products in the U.S. and from foreign regulatory authorities in order to sell our products in other countries. The FDA s review and approval process is lengthy, expensive and uncertain. Extensive pre-clinical and clinical data and supporting information must be submitted to the FDA for each indication for each product candidate in order to secure FDA approval. Before receiving FDA clearance to market our proposed products, we will have to demonstrate that our products are safe and effective on the patient population and for the diseases that are to be treated. Clinical trials, manufacturing and marketing of drugs are subject to the rigorous testing and approval process of the FDA and equivalent foreign regulatory authorities. The Federal Food, Drug and Cosmetic Act and other federal, state and foreign statutes and regulations govern and influence the testing, manufacture, labeling, advertising, distribution and promotion of drugs and medical devices. As a result, regulatory approvals can take a number of years or longer to accomplish and require the expenditure of substantial financial, managerial and other resources. The FDA could reject an application or require us to conduct additional clinical or other studies as part of the regulatory review process. Delays in obtaining or failure to obtain FDA approvals would prevent or delay the commercialization of our product candidates, which would prevent, defer or decrease our receipt of revenues. In addition, if we receive initial regulatory approval, our product candidates will be subject to extensive and rigorous ongoing domestic and foreign government regulation.

Data obtained from clinical trials are susceptible to varying interpretations, which could delay, limit or prevent regulatory clearances.

Data already obtained, or in the future obtained, from pre-clinical studies and clinical trials do not necessarily predict the results that will be obtained from later pre-clinical studies and clinical trials. Moreover, pre-clinical and clinical data is susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. The failure to adequately demonstrate the safety and effectiveness of a proposed formulation or product under development could delay or prevent regulatory clearance of the potential drug, resulting in delays to commercialization, and could materially harm our business. Our clinical trials may not demonstrate sufficient levels of safety and efficacy necessary to obtain the requisite regulatory approvals for our drugs, and thus our proposed drugs may not be approved for marketing.

Our competitive position depends on protection of our intellectual property.

Development and protection of our intellectual property are critical to our business. All of our intellectual property, patented or otherwise, has been invented and/or developed by employees of our company. If we do not adequately protect our intellectual property, competitors may be able to practice our technologies. Our success depends in part on our ability to obtain patent protection for our products or processes in the U.S. and other countries, protect trade secrets, and prevent others from infringing on our proprietary rights. We are a counterclaim defendant in a lawsuit instituted by our chief executive officer that relates to our intellectual property as described under Risks Related to Our Company above.

Since patent applications in the U.S. are maintained in secrecy for at least portions of their pendency periods (published on U.S. patent issuance or, if earlier, 18 months from earliest filing date for most applications) and since other publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that we are the first to make the inventions to be covered by our patent applications. The patent position of biopharmaceutical firms generally is highly uncertain and involves complex legal and factual questions. The U.S. Patent and Trademark Office has not established a consistent policy regarding the breadth of claims that it will allow in biotechnology patents.

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Some or all of our patent applications may not issue as patents or the claims of any issued patents may not afford meaningful protection for our technologies or products. In addition, patents issued to us or our licensors may be challenged and subsequently narrowed, invalidated or circumvented. Patent litigation is widespread in the biotechnology industry and could harm our business. Litigation might be necessary to protect our patent position or to determine the scope and validity of third-party proprietary rights, and we may not have the required resources to pursue such litigation or to protect our patent rights.

Although we require our scientific and technical employees and consultants to enter into broad assignment of inventions agreements, and all of our employees, consultants and corporate partners with access to proprietary information to enter into confidentiality agreements, these agreements may not be honored.

Products we develop could be subject to infringement claims asserted by others.

We cannot assure that products based on our patents or intellectual property that we license from others will not be challenged by a third party claiming infringement of its proprietary rights. If we were not able to successfully defend our patents or licensed rights, we may have to pay substantial damages, possibly including treble damages, for past infringement.

We face intense competition in the biotechnology and pharmaceutical industries.

The biotechnology and pharmaceutical industries are intensely competitive. We face direct competition from U.S. and foreign companies focusing on pharmaceutical products, which are rapidly evolving. Our competitors include major multinational pharmaceutical and chemical companies, specialized biotechnology firms and universities and other research institutions. Many of these competitors have greater financial and other resources, larger research and development staffs and more effective marketing and manufacturing organizations, than we do. In addition, academic and government institutions are increasingly likely to enter into exclusive licensing agreements with commercial enterprises, including our competitors, to market commercial products based on technology developed at such institutions. Our competitors may succeed in developing or licensing technologies and products that are more effective or less costly than ours, or succeed in obtaining FDA or other regulatory approvals for product candidates before we do. Acquisitions of, or investments in, competing pharmaceutical or biotechnology companies by large corporations could increase such competitors financial, marketing, manufacturing and other resources.

The market for our proposed products is rapidly changing and competitive, and new drugs and new treatments which may be developed by others could impair our ability to maintain and grow our business and remain competitive.

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change. Developments by others may render our proposed products noncompetitive or obsolete, or we may be unable to keep pace with technological developments or other market factors. Technological competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase.

As a pre-revenue company engaged in the development of drug technologies, our resources are limited and we may experience technical challenges inherent in such technologies. Competitors have developed or are in the process of developing technologies that are, or in the future may be, the basis for competition. Some of these technologies may have an entirely different approach or means of accomplishing similar therapeutic effects compared to our proposed products. Our competitors may develop drugs that are safer, more effective or less costly than our proposed products and, therefore, present a serious competitive threat to us.

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The potential widespread acceptance of therapies that are alternatives to ours may limit market acceptance of our proposed products, even if commercialized. Many of our targeted diseases and conditions can also be treated by other medication. These treatments may be widely accepted in medical communities and have a longer history of use. The established use of these competitive drugs may limit the potential for our technologies, formulations and products to receive widespread acceptance if commercialized.

Health care cost containment initiatives and the growth of managed care may limit our returns.

Our ability to commercialize our products successfully may be affected by the ongoing efforts of governmental and third-party payers to contain the cost of health care. These entities are challenging prices of health care products and services, denying or limiting coverage and reimbursement amounts for new therapeutic products, and for FDA-approved products considered experimental or investigational, or which are used for disease indications without FDA marketing approval.

Even if we succeed in bringing any products to the market, they may not be considered cost-effective and third-party reimbursement might not be available or sufficient. If adequate third-party coverage is not available, we may not be able to maintain price levels sufficient to realize an appropriate return on our investment in research and product development. In addition, legislation and regulations affecting the pricing of pharmaceuticals may change in ways adverse to us before or after any of our proposed products are approved for marketing.

Our insurance coverage may not be adequate in all circumstances.

If we commercialize our products, their use by patients could expose us to potential product liability and other claims resulting from alleged injury. This liability may result from claims made directly by consumers or by pharmaceutical companies or others selling such products. Although we currently have clinical trial insurance and directors and officers insurance, we may be unable to maintain such insurance on acceptable terms, if at all. Moreover, we have no product or professional liability insurance due to our stage of development, and we may be unable to obtain such insurance at the appropriate time on acceptable terms, if at all. Any inability to obtain and/or maintain insurance coverage on acceptable terms could prevent or limit the commercialization of any products we develop.

Risks Related to Our Stock

Stock prices for pharmaceutical and biotechnology companies are volatile.

The market price for securities of pharmaceutical and biotechnology companies historically has been highly volatile, and the market from time to time has experienced significant price and volume fluctuations that are unrelated to the operating performance of such companies. Fluctuations in the trading price or liquidity of our common stock may adversely affect, among other things, the interest in our stock by purchasers on the open market and our ability to raise capital.

Our common stock was delisted from trading on the NYSE Alternext US is now quoted on the OTC Bulletin Board.

Our common stock was delisted from trading on the NYSE Alternext US as of January 9, 2009 and as of January 21, 2009, began to be quoted on OTC Bulletin Board. Companies whose stock is quoted on the OTC Bulletin are not required to comply with the more extensive corporate governance and other listing requirements needed to meet the listing qualifications of the national securities exchanges. Investors in such companies may encounter greater compliance required by broker-dealers in trading their shares.

We could issue additional common stock, which might dilute the book value of our common stock.

Our board of directors has authority, without action or vote of our stockholders, to issue all or a part of our authorized but unissued shares. Such stock issuances could be made at a price that reflects a discount or a premium from the then-current trading price of our common stock. In addition, in order to raise capital, we may need to issue securities that are convertible into or exchangeable for a significant amount of our common stock. These issuances would dilute your percentage ownership interest, which would have the effect of reducing your influence on matters on which our stockholders vote, and might dilute the book value of our common stock. You may incur additional dilution if holders of stock options, whether currently outstanding or subsequently granted, exercise their options, or if warrant holders exercise their warrants to purchase shares of our common stock.

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Our board of directors has the power to designate a series of preferred stock without shareholder approval that could contain conversion or voting rights that adversely affect the voting power of holders of our common stock.

Our Articles of Incorporation authorizes issuance of capital stock including 20,000,000 undesignated shares, and empowers our Board of Directors to prescribe by resolution and without shareholder approval a class or series of undesignated shares, including the number of shares in the class or series and the voting powers, designations, rights, preferences, restrictions and the relative rights in each such class or series. The Board previously authorized a series of preferred stock comprised of 5,000,000 shares designated as Series A 12% preferred stock, of which 1,642,500 shares are issued and outstanding, in which each share has one vote and votes on an as-converted basis with our common stock. The Board on February 12, 2009, authorized and designated two series of preferred stock comprised Series B-1 preferred stock, of which 900,000 shares are authorized, issued and outstanding, and Series B-2 preferred stock, comprised of 2,100,000 authorized shares, of which 1,330,000 are outstanding at December 31, 2009. Each share of Series B-1 preferred stock and Series B-2 preferred stock is convertible into four shares of our common stock and, in addition to a separate class vote with respect to certain matters, votes on an as-converted basis as a class with our common stock.

We may need to request our shareholders to authorize additional shares of common stock in connection with subsequent equity finance transactions.

We are authorized to issue 300,000,000 shares of common stock, of which 51,742,090 shares were issued and outstanding on December 31, 2009. We have reserved 13,642,500 shares of common stock for issuance upon conversion of our Series A 12% preferred stock and Series B-1 and Series B-2 preferred stock, 60,647,505 shares for issuance upon exercise of our outstanding stock options and warrants and 10,090,000 shares for issuance for warrants related to additional Series B-2 offerings and for the achievement of consultant milestones. If all of these securities were converted or exercised, a total of approximately 136,122,000 shares of our common stock would be outstanding. In addition, certain dilutive finance transactions could require us to reserve additional shares if certain of our warrants become exercisable for additional shares as a result of anti-dilution protection provisions. As a result, we may have insufficient shares of common stock available to issue in connection with a future equity finance transaction, and accordingly may be required at an annual or special meeting of shareholders to seek approval of an increase in the number of our authorized shares of common stock before undertaking or as a condition to completing an offering. We cannot assure you that our shareholders would authorize an increase in the number of shares of our common stock.

As a thinly-traded stock, large sales can place downward pressure on our stock price.

Our common stock, despite certain increases of trading volume from time to time, experiences periods when it could be considered thinly traded. Finance transactions resulting in a large amount of newly issued shares that become readily tradable, or other events that cause current stockholders to sell shares, could place downward pressure on the trading price of our stock. In addition, the lack of a robust resale market may require a stockholder who desires to sell a large number of shares to sell the shares in increments over time to mitigate any adverse impact of the sales on the market price of our stock.

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USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares by the selling stockholders. To the extent that the warrants are exercised by the selling stockholders for cash, rather than by cashless exercise, we will receive proceeds constituting the exercise price of such warrants. Any such proceeds received by us through warrant exercises will be used for working capital.

SELLING STOCKHOLDERS

In February 2006, we completed a private placement to investors of $10 million aggregate principal amount of convertible debentures (all of which have been redeemed) and warrants to purchase 2,150,000 shares of common stock. Subsequent to the transaction, additional warrants were issued under their anti-dilution provisions exercisable for 10,983,606 shares of common stock. The warrants have a current exercise price of $0.50 and are exercisable until August 2011.

In February 2008, we completed a private placement of 1,742,500 units to investors, with each unit consisting of (1) one share of our Series A 12% Convertible Preferred Stock, which is convertible into one share of common stock, (2) a five-year warrant to purchase one share of common stock at an exercise price of $1.50, and (3) a five-year warrant to purchase one share of common stock at an exercise price of $2.00.

This prospectus covers the sale by the selling stockholders from time to time of:

- 10,983,606 shares of common stock issuable upon the exercise of the additional warrants issued in connection with the February 2006 private placement;
- 1,742,500 shares of common stock issuable upon the conversion of shares of our Series A 12% Convertible Preferred Stock sold in the February 2008 private placement; and
- 3,485,000 shares of common stock issuable upon the exercise of the warrants sold in the February 2008 private placement.

We issued the securities to the selling stockholders without registration under the Securities Act of 1933 (the Securities Act) in reliance upon the exemption provided by Section 4(2) of the Securities Act for transactions not involving a public offering. Prior to issuance, each selling stockholder represented to us that it was an accredited investor, as defined in Rule 501 of Regulation D under the Securities Act, and that it was acquiring the securities for investment purposes only and not with a view to, or sale in connection with, any distribution thereof.

The term selling stockholder includes (i) each person and entity that is identified in the table below (as such table may be amended from time to time by means of an amendment to the registration statement of which this prospectus forms a part) and (ii) any transferee, donee, pledgee or other successor of any person or entity named in the table that acquires any of the shares of common stock covered by this prospectus in a transaction exempt from the registration requirements of the Securities Act of 1933 and that is identified in a supplement or amendment to this prospectus.

We have listed below:

- the name of each selling stockholder;
- the number of shares of common stock beneficially owned by the selling stockholder as of the date of this prospectus;
- the maximum number of shares of common stock being offered by each of them in this offering; and

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the number of shares of common stock to be owned by the selling stockholder after this offering (assuming sale of such maximum number of shares) and the percentage of the class which such number constitutes (if one percent or more).

The footnotes to the table identify each selling stockholder that is a registered broker-dealer or an affiliate of a registered broker-dealer.

Except as otherwise noted below, during the last three years, no selling stockholder has been an officer, director or affiliate of our company, nor has any selling stockholder had any material relationship with our company or affiliates during that period. Each selling stockholder represented at the closing of the private placement that it did not have any contract, undertaking, agreement or arrangement with any person to sell, transfer, pledge, hypothecate, grant any option to purchase or otherwise dispose of any of the securities. Based on information provided to us by the selling stockholders, the selling stockholders purchased the securities in the ordinary course of business.

The shares of common stock being offered hereby are being registered to permit public secondary trading, and the selling stockholders are under no obligation to sell all or any portion of their shares included in this prospectus. The information contained in the following table is derived from information provided to us by selling stockholders, our books and records, as well as from our transfer agent. Where we were unable to obtain information from a selling stockholder with respect to the total number of shares beneficially owned by such holder, we have included only the shares underlying warrants held by such holder.

Unless otherwise indicated, each person has sole investment and voting power with respect to the shares indicated. For purposes of this table, a person or group of persons is deemed to have beneficial ownership of any shares as of a given date which such person has the right to acquire within 60 days after such date.

We do not know when or in what amounts a selling stockholder may offer shares for sale. The selling stockholders may not sell any or all of the shares offered by this prospectus. Because the selling stockholders may offer some or all of the shares pursuant to this prospectus, and because there are currently no agreements, arrangements or understandings with respect to any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders. The numbers of shares shown under the column Common Stock Owned Upon Completion of this Offering reflect the assumption solely for purpose of this table that such shares are still owned upon completion of the offering, which assumption is not intended to override the selling stockholder table in, as applicable, any other prospectus covering the resale of any other of our securities by the selling stockholders.

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Name of Selling Stockholder	Common Stock Beneficially Owned Prior to the Offering	Common Stock Offered Pursuant to this Prospectus[1]	Common Stock Owned Upon Completion of this Offering	Percentage of Common Stock Owned Upon Completion of this Offering
Alexandra Global Master Fund Ltd.[2]	1,193,508	998,508	195,000	*
William & Karen Belcher	178,523	75,000	103,523	*
Bristol Investment Fund, Ltd.[3]	1,293,508	998,508	295,000	*
Roy Brown	119,292	75,000	44,292	*
Clark Capraro	41,540	30,000	11,540	*
Mildred Christian[4]	684,171	75,000	609,171	1.2%
Dale Conaway[5]	388,252	30,000	358,252	*
Cranshire Capital, L.P.[6]	1,693,508	998,508	695,000	1.3%
Howard Crosby	856,200	150,000	706,200	1.4%
James Czirr Trust[7]	451,700	300,000	151,700	*
Cynthia Dimmette	97,792	75,000	22,792	*
DKR Soundshore Oasis Holding Fund Ltd.[8]	1,193,508	998,508	195,000	*
Fivex LLC[9]	300,000	300,000	0	
Peter Fox	79,167	75,000	4,167	*
Gayle Galan Living Trust	104,500	75,000	29,500	*
Harvey & Sandra Gertsch	104,175	75,000	29,175	*
Irwin Goldstein	41,170	30,000	11,170	*
Richard & Mary Gumaer	38,838	37,500	1,338	*
James Hart	120,000	90,000	30,000	*
Preston & Carrie Hawkins	355,525	225,000	130,525	*
Iroquois Master Fund Ltd.[10]	1,393,508	998,508	395,000	*
Robert Jacobs	280,185	165,000	115,185	*
JAM Capital Associates, LLC[11]	104,200	60,000	44,200	*
JMG Capital Partners, L.P.[12]	596,757	499,257	97,500	*
JMG Triton Offshore Fund, Ltd.[13]	596,757	499,257	97,500	*
Kendler Family Trust	233,300	75,000	158,300	*
Kings Road Investments, Ltd.[14]	2,387,022	1,997,022	390,000	*
Anatole Klyosov[15]	1,778,684	75,000	1,703,684	3.3%
Frederick Laun	562,284	150,000	412,284	*
Herbert Lazar Revocable Trust	31,670	30,000	1,670	*
Steven Lazar	79,292	75,000	4,292	*
Thomas & Margaret McNulty	79,175	75,000	4,175	*
James McPhelan	98,000	75,000	23,000	*
Judith Melillo	125,000	75,000	50,000	*
Robert Myers	115,000	75,000	40,000	*
William Novak	131,000	75,000	56,000	*
Gilbert Omenn	268,000	150,000	118,000	*
Bertram Pitt	258,350	150,000	108,350	*
James & Julie Prendergast	78,542	75,000	3,542	*
Michael & Paige Prendergast	86,000	75,000	11,000	*
Robert Rettig	112,850	83,675	29,175	*
Rodman & Renshaw, Inc.[16]	1,231,175	998,508	232,667	*
Stephen & Peggy Rogers	193,669	75,000	118,669	*
Russo Family Living Trust	79,175	75,000	4,175	*
Robert & Claudine Salanski	230,000	75,000	155,000	*
Gary & Linda Sanford Revocable Living Trust	100,000	75,000	25,000	*
Earl Schalin	100,000	75,000	25,000	*
Charles Shafer	129,175	75,000	54,175	*
James Shaw	82,425	75,000	7,425	*
Michael Sheikh	320,000	90,000	230,000	*

David Smith	525,000	525,000	0	
Smithfield Fiduciary, LLC[17]	2,503,689	1,997,022	506,667	1.0%
Bjarn & Glafira Sorensen	44,150	30,000	14,150	*
Irving Sparage Revocable Trust	91,675	75,000	16,675	*
Charles Stafford	79,175	75,000	4,175	*
Tailwind V.C., LLC[18]	75,000	75,000	0	
Linda Upton Living Trust	31,075	30,000	1,075	*
Gary Zoellner	224,050	150,000	74,050	*
George Zoellner	31,634	30,000	1,634	*
TOTAL		**15,836,106**		

* Amount less than one percent.

Percentage calculations are based on 51,742,090 shares of our common stock issued and outstanding as of March 12, 2010.

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[1] Unless otherwise indicated, two-thirds of the shares shown in this column for each selling stockholder are issuable upon the exercise of warrants, and the remaining one-third are issuable upon the conversion of shares of Series A 12% Convertible Preferred Stock.

[2] Represents shares issuable upon the exercise of warrants. Alexandra Investment Management, LLC, a Delaware limited liability company (AIM), serves as investment adviser to Alexandra Global Master Fund Ltd., a British Virgin Islands company (Alexandra). By reason of such relationship, AIM may be deemed to share dispositive power over the shares of common stock stated as beneficially owned by Alexandra. AIM disclaims beneficial ownership of such shares of common stock. Mr. Mikhail A. Filimonov (Filimonov) is the Chairman, Chief Executive Officer, Chief Investment Officer and a managing member of AIM. By reason of such relationships, Filimonov may be deemed to share dispositive power over the shares of common stock stated as beneficially owned by Alexandra. Filimonov disclaims beneficial ownership of such shares of common stock.

[3] Represents shares issuable upon the exercise of warrants.

[4] Formerly a Director of the Company. Includes 552,000 exercisable options.

[5] Formerly a Director of the Company. Includes 307,500 exercisable options.

[6] Represents shares issuable upon the exercise of warrants. Downsview Capital, Inc. (Downsview) is the general partner of Cranshire Capital, L.P. (Cranshire) and consequently has voting control and investment discretion over securities held by Cranshire. Mitchell P. Kopin (Mr. Kopin), President of Downsview, has voting control over Downsview. As a result, each of Mr. Kopin, Downsview and Cranshire may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the shares owned by Cranshire which are being registered hereunder.

[7] James C. Czirr is the trustee of the James Czirr Trust and is also Executive Chairman and Director of the Company.

[8] Represents shares issuable upon the exercise of warrants. The investment manager of DKR Soundshore Oasis Holding Fund Ltd. (the Fund) is DKR Oasis Management Company LP (the Investment Manager). The Investment Manager has the authority to take any and all actions on behalf of the Fund with respect to the shares held by the Fund. Mr. Seth Fischer is the managing partner of Oasis Management Holding LLC, one of the general partners of the Investment Manager. Mr. Fischer has ultimate responsibility for trading with respect to the Fund. Mr. Fischer disclaims beneficial ownership of these shares.

[9] David Smith is the manager of Fivex LLC, a Connecticut limited liability company, and may be deemed to have dispositive power over the shares held by this entity. Mr. Smith disclaims beneficial ownership of these shares.

[10] Represents shares issuable upon the exercise of warrants. Joshua Silverman, the general partner of Iroquois Capital LP, may be deemed to have voting and dispositive over the shares held by Iroquois Capital LP. Mr. Silverman disclaims beneficial ownership of these shares.

[11] Leonard Pearlman is the manager of JAM Capital Associates, LLC, a New York limited liability company, and may be deemed to have dispositive power over the shares held by this entity. Mr. Pearlman disclaims beneficial ownership of these shares.

[12] Represents shares issuable upon the exercise of warrants. JMG Capital Partners, L.P. is a California limited partnership (JMG Partners). Its general partner is JMG Capital Management, LLC, a Delaware limited liability company (the Manager), and an investment adviser that has voting and dispositive control over the investments of JMG Partners, including the shares held by JMG Partners. The equity interests of the Manager are owned by JMG Capital Management, Inc., a California corporation (JMG Capital), and Asset Alliance Holding Corp., a Delaware corporation. Jonathan M. Glaser is the Executive Officer and Director of JMG Capital and has sole investment discretion over the portfolio holdings of JMG Partners.

[13] Represents shares issuable upon the exercise of warrants. JMG Triton Offshore Fund, Ltd., organized under the law of the British Virgin Islands (the Fund), is an international business company. The Fund s investment manager is Pacific Assets Management LLC, a Delaware limited liability company (the Manager), that has voting and dispositive control of the Fund s investments, including the shares held by the Fund. The equity interests of the Manager are owned by Pacific Capital Management, Inc., a California corporation (Pacific), and Asset Alliance Holding Corp., a Delaware corporation. The equity interests of Pacific are owned by Messrs. Roger Richter, Jonathan M. Glaser and Daniel A. David. Messrs. Glaser and Richter have sole investment discretion over the Fund s portfolio holdings.

[14] Represents shares issuable upon the exercise of warrants. Kings Road Investments Ltd. (Kings Road) is a wholly-owned subsidiary of Polygon Global Opportunities Master Fund (Master Fund). Polygon Investment Partners LLP and Polygon Investment Partners LP (the Investment Managers), Polygon Investments Ltd. (the Manager), the Master Fund, Alexander Jackson, Reade Griffith and Paddy Dear share voting and dispositive power over the securities held by Kings Road including the shares held by Kings Road. The Investment Managers, the Manager and Messrs. Jackson, Griffith and Dear disclaim beneficial ownership of these shares.

[15] Chief Scientist of the Company. Includes 650,000 exercisable options.

[16] Represents shares issuable upon the exercise of warrants. Rodman & Renshaw, Inc. is a registered broker-dealer and FINRA member. David Horin has the power to vote or dispose of the shares held by this entity.

[17] Represents shares issuable upon the exercise of warrants. Highbridge Capital Management, LLC (Highbridge) is the trading manager of Smithfield Fiduciary LLC (Smithfield) and has voting control and investment discretion over securities held by Smithfield. Glen Dubin and Henry Swieca control Highbridge. Each of Highbridge and Messrs. Dubin and Swieca disclaims beneficial ownership of the shares held by Smithfield.

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[18] David Smith is the manager of Tailwind V.C., LLC, a Connecticut limited liability company, and may be deemed to have dispositive power over the shares held by this entity. Mr. Smith disclaims beneficial ownership of these shares.

PLAN OF DISTRIBUTION

Each selling stockholder and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of his, her or its shares on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling shares:

- 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;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the selling stockholders to sell a specified number of shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any of these methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended (the Securities Act), if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA/NASD Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA/NASD IM-2440.

In connection with the sale of shares, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares in the course of hedging the positions they assume. The selling stockholders may also sell shares short and deliver these shares to close out their short positions, or loan or pledge shares to broker-dealers that in turn may sell these shares. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to that broker-dealer or other financial institution of shares offered by

this prospectus, which shares that broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect that transaction).

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The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be underwriters within the meaning of the Securities Act in connection with those sales. In that event, any commissions received by those broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the shares. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%) of the gross proceeds of any sale.

We are required to pay certain fees and expenses incurred by us incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because selling stockholders may be deemed to be underwriters within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 there under. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the shares may be resold by the selling stockholders without registration and without regard to any volume limitations by reason of Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the shares have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Securities Exchange Act of 1934, as amended (the Exchange Act), any person engaged in the distribution of the shares may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations there under, including Regulation M, which may limit the timing of purchases and sales of the shares by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

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BUSINESS

We are a development-stage company engaged in the discovery and development of therapeutics that target Galectin receptors that we believe enhance existing cancer treatments and could also be used in the treatment of liver, microbial and inflammatory diseases. All of our products are presently in development, including pre-clinical and clinical trials.

Since our inception on July 10, 2000, our primary focus has been the development of a new generation of anti-cancer treatments using polysaccharide polymers which are aimed at increasing survival and improving the quality of life for cancer patients. Our lead product candidate, DAVANAT ® , is a patented new chemical entity that we believe, when administered in combination with chemotherapy, increases the efficacy while reducing adverse side effects of the chemotherapy. We hold the patent on DAVANAT ® , which was invented by company founders David Platt, Ph.D., our former Chief Executive Officer, and Anatole Klyosov, Ph.D., our Chief Scientist.

On February 12, 2009, David Platt, Ph.D. resigned as Chairman of our Board of Directors and as Chief Executive Officer and each of Dale H. Conaway, Dr. Henry J. Esber and Dr. James T. Gourzis resigned from our Board of Directors. Theodore Zucconi, Ph.D. was named our Chief Executive Officer and President. Also, on February 12, 2009, James C. Czirr, Rod Martin, Gilbert Amelio, Ph.D. and Peter Traber, M.D., were elected to our Board of Directors. Mr. Czirr and Mr. Martin were designated as the Series B Directors and Dr. Amelio and Dr. Traber were the Series B Nominees under the terms of our Series B convertible preferred stock agreement announced on February 12, 2009.

In 2002, the Federal Drug Administration (FDA) granted us an Investigational New Drug application (IND), for use of DAVANAT® in combination with 5-fluorouracil (5-FU), to treat late-stage cancer patients with solid tumors. 5-FU is FDA-approved and one of the most widely used chemotherapies for treatment of various types of cancer, including colorectal, breast and gastrointestinal. In September 2008, we submitted a clinical and pre-clinical package to the FDA in support of our DAVANAT ® New Drug Application (NDA). The FDA reported to us in its minutes for the December 2008 meeting that we will be required to conduct a Phase III trial to demonstrate superiority to the best standard of care for late stage colorectal cancer patients. We believe that using DAVANAT ® in combination with 5-FU enables greater absorption of the chemotherapy in cancer cells while reducing its toxic side effects.

We plan to submit an NDA for co-administration of DAVANAT® with 5-FU for the indication of colorectal cancer.

We were incorporated under Nevada law on January 26, 2001 and in May of that year acquired a Massachusetts corporation (organized on July 10, 2000) engaged in the business we now undertake. We have a wholly-owned Delaware subsidiary that we formed in 2003 to hold our cash and cash equivalents. We also own 10% of a Nevada subsidiary that we formed in October 2008 for the development of our technology in cardiovascular treatments.

Our Strengths and Strategies

Focus on novel therapeutic opportunities that target Galectin receptors. We believe our company is one of the pioneers focused on development of therapeutics that target Galectin receptors to treat cancer. Carbohydrate molecules, which are essential to the transmission and recognition of cellular information, have been shown to play an important role in major diseases including cancer, cardiovascular disease, Alzheimer s disease, inflammatory disease and viral infections. We believe this offers a largely untapped area for treatment of disease including chemotherapeutics, infection treatment, vaccines and antibiotics.

Leverage extensive scientific expertise. Our scientists have substantial expertise, developed over decades, in the area of carbohydrates that target Galectin receptors. Our team has conducted research in therapeutic application of carbohydrate-based therapeutics for more than 20 years. Dr. Klyosov, who headed the Carbohydrate Research Laboratory at the USSR Academy of Sciences and was a visiting biochemistry professor at Harvard Medical School, holds more than 20 patents. We believe that his expertise, supplemented by members of our Scientific and Medical Advisory Boards, provides us with a substantial advantage in this relatively new area of drug development.

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Completion of development milestones toward commercialization of DAVANAT® and 5-FU combination cancer therapy. We have completed important milestones in the development of DAVANAT ® in combination with 5-FU to treat late-stage cancer patients with solid tumors. These include our submission of the Drug Master File, or DMF, to the FDA in May 2008, which we believe demonstrates our ability to produce commercial quantities of pharmaceutical-grade DAVANAT ® under manufacturing standards known as cGMP (current Good Manufacturing Process); our submission in September 2008 of a clinical and pre-clinical package to the FDA in support of our DAVANAT® NDA; and our December 2008 pre-NDA meeting with the FDA which provided guidance as to certain components of a Phase III trial of DAVANAT ® /5-FU that would be needed for an NDA demonstrating superiority to the best standard of care for late stage colorectal patients. We also have explored utilizing DAVANAT ® with other therapeutics and also as a potential stand-alone therapeutic.

Apply our technology to broad range of applications. Our research indicates that DAVANAT® has the potential for broad application. Following development of DAVANAT ® in combination with chemotherapies and biologics, we plan to combine it with other drugs to extend its use to treat other serious diseases. Generally speaking, a biologic is a therapeutic product based on materials derived from living materials, whereas chemotherapies are chemical compounds, typically used in cancer treatment. Pre-clinical studies indicate that DAVANAT ®, and other proprietary therapeutics we have in development, may have application for advanced treatment of liver, microbial and inflammatory diseases. This could substantially increase the marketability of our products.

Product Development

We are initially developing a pipeline of compounds that may be combined with chemotherapies, such as 5-FU and biologics, such as Avastin®, so as to improve the clinical benefit to cancer patients. Based on our research, we believe DAVANAT ® , when combined with chemotherapies and biologics can significantly increase the clinical benefit to cancer patients by extending survival and increasing quality of life. Our lead product candidate, DAVANAT ® , is a patented new chemical entity that has completed Phase II trials for treatment of colorectal cancer in combination with 5-FU.

To date, DAVANAT® has been administered to approximately 100 cancer patients in Phase I and II trials. Data from a Phase II trial for late-stage colorectal cancer patients showed DAVANAT ® extended median survival to 6.7 months with significantly reduced side effects, as compared to 4.6 months for best standard of care as determined by the patient s physician. Patients have improved quality of life as result of experiencing fewer adverse side effects of the chemotherapy and requiring less hospitalization.

In addition, results of pre-clinical studies we have conducted in mice show that more 5-FU accumulates in the tumor when co-administered with DAVANAT ® than when 5-FU is administered alone in the mice. Our pre-clinical and clinical trial data also show that DAVANAT ® is safe and non-toxic.

Our NDA for DAVANAT® will seek FDA approval for co-administration of DAVANAT® with 5-FU for intravenous injection for the treatment of colorectal cancer. We plan additionally to file NDAs for DAVANAT ® in combination with other chemotherapeutics and biologics.

According to its published guidance, the FDA initially determines whether an NDA filing is complete for purposes of allowing a review, and, if allowed, then determines whether to approve the NDA, a process that takes six months (typically for a chemotherapy) or ten months (typically for a biologic). Upon approval, an applicant may commence commercial marketing and distribution of the approved products. We have retained Camargo Pharmaceutical Services, LLC (Camargo) for regulatory support of our submission with the FDA. Camargo s expertise in regulatory affairs and submissions includes the preparation and submission of NDAs.

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We are also developing other therapeutic compounds for treatment of other serious disease, such as liver and kidney fibrosis. These product candidates are all in the pre-clinical stage of development. We entered into research collaborations with the Mount Sinai School of Medicine to study the anti-fibrotic effects of our compounds on liver fibrosis and with Brigham and Women s Hospital to evaluate the anti-fibrotic effects of these compounds to treat acute and chronic kidney disease. Our compound reduced collagen expression and reversed fibrosis in animal models. Whereas previously *in vitro* data indicated a reversal of fibrosis markers, in this proof-of-concept animal study, the compounds clearly reduced collagen expression and reversed liver fibrosis.

DAVANAT®

DAVANAT®, our lead product candidate in development, is a proprietary polysaccharide polymer comprised of mannose and galactose that is derived from plant sources and has a precisely defined chemical structure. More specifically, it is galactomannan which is isolated from seeds of guar and subjected to a controlled partial chemical and physical degradation. Guar is a legume grown in the United States and elsewhere for a wide variety of food and non-food uses.

We believe the mechanism of action for DAVANAT® is based upon interaction with lectins, which are cell surface proteins that bind only to a particular kind of carbohydrate. DAVANAT ® is formulated to attach to specific lectins, called galectins, which are abundant on the surface of tumor cells, while selectively avoiding healthy tissue. We believe the structure of DAVANAT ® is such that it is attracted to Galectin receptors that are specific and over-expressed on cancer cells. The Galectin receptor effectively interacts with DAVANAT ® and the chemotherapy and/or biologic combination and assists in the accumulation of the chemotherapy in the cancer cell. This may allow for administration of higher doses of chemotherapy thereby increasing efficacy while reducing toxicity.

Pre-clinical Studies of DAVANAT®

Our pre-clinical studies demonstrate that DAVANAT® when used in combination with chemotherapies, such as 5-FU and irinotecan, and biologics, such as Avastin®, may improve the clinical benefit of anti-cancer treatments. Pre-clinical studies also demonstrated delayed tumor growth and tumor shrinkage against a control group of animals when DAVANAT ® was used in combination with standard therapies. These studies demonstrated that DAVANAT ® could be used effectively with different chemotherapies and biologics.

Clinical Trial Development of DAVANAT®

Results from our Phase II clinical trial data in late-stage cancer patients shows that DAVANAT® extends median survival to 6.7 months from 4.6 months (or a 46% increase) after other treatments were exhausted. The results of this trial also demonstrated reduction of adverse gastrointestinal, hematological and other side effects of chemotherapy treatment.

Phase I Trial for Late-Stage Patients with Solid Tumors. In 2005, we completed a Phase I study to evaluate DAVANAT®, alone and in combination with 5-FU, to treat solid tumors in a trial of 40 end-stage patients with advanced solid tumors who failed chemotherapy, radiation therapy, and/or surgical treatments. The objective of the open label study was to evaluate the safety and tolerability of escalating doses of DAVANAT ® (30-280mg/m 2) when administered alone and in combination.

Based on objective tumor assessment using Response Evaluation Criteria in Solid Tumors, or RECIST, the disease was stabilized in 14 of 26 of the evaluable patients with measurable disease. Furthermore, 7 of 10 patients were stabilized at the highest dose level of DAVANAT ® administered in the study. Efficacy results are analyzed based on RECIST following completion of the second cycle of treatment. According to RECIST, a stable disease is a disease with neither sufficient shrinkage to qualify for Partial Response (more than 30% shrinkage) nor sufficient increase to qualify for Progressive Disease (greater than 20% increase) taking as reference the smallest sum longest diameter since the treatment started.

The Phase I data also indicate that DAVANAT® was well tolerated by patients. The maximum tolerated dose was not reached indicating DAVANAT ® is safe and has the potential for further dose escalation. Adverse side effects were primarily disease related. Additionally, the results showed that the DAVANAT ® /5-FU combination remained in the bloodstream up to eight times longer, which we believe increases the efficacy of the treatment.

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Phase II Trial for Late Stage Patients with Metastatic Colorectal Cancer. In 2004, we initiated a Phase II clinical trial to further evaluate DAVANAT ® for late-stage patients with metastatic colorectal cancer. The multi-center, open label, single-dose level study was designed to evaluate up to 15 patients in stage one, and up to 18 patients in stage two. The study, which was designed to evaluate the efficacy and safety of DAVANAT ® in combination with chemotherapy when administered in monthly cycles, had two objectives: (1) to document the rate of response and stabilization of patients with advanced colorectal cancer; and (2) to continue evaluating the safety of the DAVANAT ® in combination 5-FU. Dosing of patients began in May 2005. We stopped recruiting for the study in May 2006 because we achieved our objective. The data for the study indicates that based on objective tumor assessment one patient experienced a partial tumor response and the disease was stabilized in 6 of 20 patients. Data on 20 patients from this trial showed that DAVANAT ® extended median survival. We tracked these patients and gathered data after they left the trial. The patients entered the trial with disease that progressed despite previously being treated with standard chemotherapies and biologics.

Phase II Trial for First-line Treatment of Patients with Biliary Cancer. In 2007, we initiated a Phase II trial for the first-line treatment of patients with biliary (gall bladder) cancer. Biliary cancer may represent an opportunity for orphan drug status approval. See FDA Orphan Drug Designation below under Government Regulation. The multi-center, open label, single-dose level study is designed to evaluate up to 42 patients. The study was designed to evaluate the efficacy and safety of DAVANAT ® when administered for at least two monthly cycles or until disease progression. The trial had two objectives: (1) complete/partial tumor response in 20% of patients (17% in the first stage); and (2) the safety of DAVANAT ® regimen in this patient population. We stopped the trial due to financial constraints in the second quarter of 2008 and do not expect to resume it.

Phase II Trial for First-line Treatment of Patients with Colorectal Cancer. In 2006, we initiated a Phase II trial for initial treatment of colorectal cancer patients. The multi-center, open label, single-dose level study was designed to evaluate up to 50 patients who are unable to sustain the high toxicity of current intensive combination chemotherapy. The study was expected to evaluate the efficacy and safety of DAVANAT ® when administered in combination with the current standard of care in two monthly cycles or until disease progression or toxicity. The primary objectives of the study were a complete or partial response in 33% of the patients and a secondary measurement of progression free survival at 6 and 12 months. We stopped the trial due to financial constraints in the second quarter of 2008 and do not expect to resume it.

See Risk Factors Risks Related to our Company We have one drug candidate in clinical trials and results are uncertain for additional discussion of risks related to clinical trials.

Patents and Proprietary Rights

Our development and commercial viability, and ultimately our competitiveness, depend on our ability to develop and maintain the proprietary aspects of our technology and operate without infringing on the proprietary rights of others. We rely on a combination of patent, trademark, trade secret and copyright law and contract restrictions to protect the proprietary aspects of our technologies. We seek to limit disclosure of our intellectual property by requiring employees, consultants, and any third parties with access to our proprietary information to execute confidentiality agreements and by restricting access to that information.

As of December 31, 2009, we held five U.S. patents and have patent applications pending from the U.S. Patent and Trademark Office. Many of our patents and patent applications cover methods and composition for reducing toxicity and enhancing chemotherapeutic drugs by co-administering a polysaccharide with a chemotherapeutic agent. We have corresponding patent applications pending in Europe, Canada, Israel, Brazil, Japan, China and Australia. Additionally, we have patent applications in other areas to utilize our carbohydrate-based compounds to treat disease other than cancer. See Risk Factors Risks Related to the Drug Development Industry Our competitive position depends on protection of our intellectual property.

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Research

Our initial focus is on the design and analysis of Galectin targeting therapeutics to improve the clinical benefit of chemotherapeutic agents and biologics. We contract with independent laboratories and other facilities to conduct our research, which is designed, evaluated and managed by our scientists. We do not anticipate building in-house research or development facilities or hiring staff other than for purposes of designing and managing our out-sourced research.

As we develop products eligible for clinical trials, we contract with independent parties to design the trial protocols, arrange for and monitor the clinical trials, collect data and analyze data. In addition, certain clinical trials for our products may be conducted by government-sponsored agencies and will be dependent on governmental participation and funding. Our dependence on independent parties and clinical sites involves risks including reduced control over the timing and other aspects of our clinical trials.

Our research and development expenditures totaled $18.5 million for the cumulative period from inception (July 10, 2000) through December 31, 2009. During the years ended December 31, 2009 and 2008, our expenditures for research and development were $1.1 million and $1.8 million, respectively.

Manufacturing and Marketing

We are a development stage company at this time and do not intend to establish internal facilities for the manufacture of our products for clinical or commercial production. To have our products manufactured, we have developed and will continue to develop relationships with third-parties that have established manufacturing capabilities. We are not a party to any long-term agreement with any of our suppliers and, accordingly, we have our products manufactured on a purchase-order basis from one of two primary suppliers.

Because our products are in the development stage, we have not created a sales and marketing staff to commercialize pharmaceutical products. If we develop products eligible for commercial sale, we will need to develop a sales and marketing capability or rely on third parties such as licensees, collaborators, joint venture partners or independent distributors to market and sell those products. Our dependence on third-party manufacturers and marketers will involve risks relating to our reduced control, and other risks including those discussed in Risk Factors Risks Related to our Company We will depend on third parties to manufacture and market our products and to design trial protocols, arrange for and monitor the clinical trials, and collect and analyze data.

Competition

Many biotechnology and pharmaceutical companies are developing new technologies for the treatment of cancer and other diseases. Technologies such as monoclonal antibodies, developed by Genentech, Inc., could be competitive with our Galectin therapeutic platforms. Companies, such as Momenta Pharmaceuticals Inc., are developing technologies to improve or develop new or existing drugs. Other companies, such as ImClone Systems Incorporated, are trying to improve the therapeutic profile of widely used protein-based drugs. While these companies may broaden the market for our products they may also provide competitive alternatives to our products.

See Risk Factors Risks Related to the Drug Development Industry We face intense competition in the biotechnology and pharmaceutical industries for additional discussion related to our current and potential competition.

Government Regulation

The research, development, testing, manufacture, labeling, promotion, advertising, distribution, and marketing, among other things, of our products are extensively regulated by governmental authorities in the United States and other countries. The FDA regulates drugs under the federal Food, Drug, and Cosmetic Act and its implementing regulations. Failure to comply with the applicable U.S. requirements may subject us to administrative or judicial sanctions, such as FDA refusal to approve pending NDAs, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, and/or criminal prosecution.

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Drug Approval Process

Drugs may not be marketed in the U.S. until the FDA has approved them. The steps required before a drug may be marketed in the U.S. include (similar rules apply in other countries):

1. Pre-clinical laboratory tests, animal studies, and formulation studies,

2. Submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials may begin,

3. Adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug for each indication,

4. Submission to the FDA of an NDA,

5. Satisfactory completion of an FDA inspection of the manufacturing facility or facilities, at which the drug is produced to assess compliance with cGMP established by the FDA,

6. FDA review and approval of the NDA, and

7. FDA review and approval of a trademark used in connection with a pharmaceutical.

Pre-clinical tests include laboratory evaluation of product chemistry, toxicity, and formulation, as well as animal studies. The results of the pre-clinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND, which must become effective before human clinical trials may begin. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about issues such as the conduct of the trials as outlined in the IND. In such a case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. There is no certainty that submission of an IND will result in the FDA allowing clinical trials to begin.

Clinical trials involve the administration of the investigational drug to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing the objectives of the study, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Each trial must be reviewed and approved by an independent Institutional Review Board, IRB, before it can begin. Study subjects must sign an informed consent form before participating in a clinical trial. Phase I usually involves the initial introduction of the investigational drug into patients to evaluate its safety, dosage tolerance, pharmacodynamics, and, if possible, to gain an early indication of its effectiveness. Phase II usually involves trials in a limited patient population to (i) evaluate dosage tolerance and appropriate dosage; (ii) identify possible adverse effects and safety risks; and (iii) evaluate preliminarily the efficacy of the drug for specific indications. Phase III trials usually further evaluate clinical efficacy and test further for safety by using the drug in its final form in an expanded patient population. There is no assurance that these trials will be completed within a specified period of time, if at all.

Assuming successful completion of the required clinical testing, the results of the pre-clinical studies and of the clinical studies, together with other detailed information, including information on the manufacture and composition of the drug, are submitted to the FDA in an NDA requesting approval to market the product for one or more indications. Before approving an NDA, the FDA usually will inspect the facilities at which the drug is manufactured, and will not approve the product unless compliance with cGMP is satisfactory. If the FDA evaluates the NDA and the manufacturing facilities as acceptable, the FDA will issue an approval letter. If the FDA evaluates the NDA submission or the manufacturing facilities as not acceptable, the FDA will outline the deficiencies in the submission and often will request additional testing or information. Even if an applicant submits the requested additional information, the FDA ultimately may decide that the NDA does not satisfy the

regulatory criteria for approval. The testing and approval process requires substantial time, effort, and financial resources, and there is no assurance that any approval will be granted on a timely basis, if at all. After approval, certain changes to the approved product, such as adding new indications, manufacturing changes, or additional labeling claims are subject to further FDA review and approval.

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See Risk Factors Risks Related to the Drug Development Industry We will need regulatory approvals to commercialize our products for additional discussion of regulatory risks related to our drug development program.

FDA Priority Review

FDA procedures provide for priority review of an NDA submitted for drugs that, compared to currently marketed products, offer a significant improvement in the treatment, diagnosis, or prevention of a disease. NDAs that are granted priority review are acted upon more quickly than NDAs given standard review. If we were to seek priority review, there can be no guarantee that the FDA will grant priority review status, that priority review status will affect the time of review, or that the FDA will approve the NDA submitted for any of our product candidates, whether or not priority review status is granted.

Post-Approval Requirements

If FDA approval of one or more of our products is obtained, we will be required to comply with a number of post-approval requirements. For example, holders of an approved NDA are required to report certain adverse reactions to the FDA and to comply with certain requirements concerning advertising and promotional labeling for their products. Also, quality control and manufacturing procedures must continue to conform to cGMP after approval, and the FDA periodically inspects manufacturing facilities to assess compliance with cGMP. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. In addition, discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved NDA, including withdrawal of the product from the market. Also, new government requirements may be established that could delay or prevent regulatory approval of our products under development.

FDA 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. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are publicly disclosed by the FDA. Orphan drug designation does not convey an advantage in, or shorten the duration of, the regulatory review and approval process. If a product which has an orphan drug designation subsequently receives the first FDA approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the FDA may not approve any other applications to market the same drug for the same indication, except in certain very limited circumstances, for a period of seven years. As well, orphan drugs usually receive ten years of marketing exclusivity in the European Union. We currently are not seeking orphan drug designation.

Regulation Outside the United States

Before our products can be marketed outside of the United States, they are subject to regulatory approval similar to that required in the United States, although the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country. No action can be taken to market any product in a country until an appropriate application has been approved by the regulatory authorities in that country. The current approval process varies from country to country, and the time spent in gaining approval varies from that required for FDA approval. In certain countries, the sales price of a product must also be approved. The pricing review period often begins after market approval is granted. No assurance can be given that even if a product is approved by a regulatory authority, satisfactory prices will be approved for such product.

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Environmental Regulation

Pharmaceutical research and development involves the controlled use of hazardous materials. Biotechnology and pharmaceutical companies must comply with laws and regulations governing the use, generation, manufacture, storage, air emission, effluent discharge, handling and disposal of certain materials, biological specimens and wastes. We do not anticipate building in-house research, development or manufacturing facilities, and, accordingly, do not expect to have to comply directly with environmental regulation. However, our contractors and others conducting research, development or manufacturing activities for us may be required to incur significant compliance cost, and this could in turn could increase our expense or delay our completion of research or manufacturing programs.

Employees

As of December 31, 2009, we had six full-time employees, two of whom were involved primarily in management of our pre-clinical research and development and clinical trials and four who were involved primarily in financial management and administration of our company. We also had one part-time contractor who provides manufacture and clinical trial support and two part-time contractors, one of whom provides financial management services and the other of whom serves as our medical director.

Properties

We lease 9,400 square feet for our executive offices located at 7 Wells Avenue, Newton, Massachusetts. We have a five year lease that commenced in August 2006 with an option to extend for an additional five years. We believe this space is suitable for our present operations and adequate for foreseeable expansion of our business.

Legal Proceedings

Other than claims and legal proceedings that arise from time to time in the ordinary course of business which are not material, the Company has no pending legal proceedings except as follows:

In January 2004, David Platt, Ph.D., our former Chairman and Chief Executive Officer, filed a lawsuit in Massachusetts Superior Court against GlycoGenesys, Inc., which asserted counterclaims against us related to our intellectual property. Prospect Therapeutics, Inc. subsequently purchased certain assets including this lawsuit from the GlycoGenesys bankruptcy estate. Before the Court could issue a decision after the lawsuit went to trial in March 2009, Prospect Therapeutics announced on May 15, 2009, that it had assigned all of its assets for the benefit of creditors and would liquidate. In response, we moved to dismiss the lawsuit on various grounds, including failure to prosecute. Prospect s assets, including the lawsuit, were sold at auction on June 29, 2009, and the new owner of the assets elected not to prosecute. After a post-trial hearing, the Court issued a judgment dated July 17, 2009, dismissing the lawsuit against us and Dr. Platt.

On January 30, 2008, Custom Equity Research, Incorporated (d/b/a Summer Street Research Partners) filed a lawsuit against us in the Superior Court of the Commonwealth of Massachusetts, alleging claims for breach of contract, declaratory judgment and unjust enrichment arising out of an engagement letter under which Summer Street agreed to provide institutional investment placement services to us. Summer Street claims it is entitled to a placement fee for each placement made during the term of the agreement and for each issuance of securities made or agreed to be made by us from October 17, 2007 through November 16, 2008. We initially responded to the lawsuit with a motion to dismiss, which the Court denied on June 23, 2008, finding that the letter agreement was ambiguous with respect to Summer Street s entitlement to compensation. The Court also denied Summer Street s motion for a prejudgment attachment and trustee process, preliminarily finding that Summer Street was not likely to prevail on any of its claims. On July 3, 2008, we filed our answer, denying Summer Street s material allegations. The parties are currently engaged in discovery and no trial date has been set for this matter. We believe the lawsuit is without merit and intend to contest it vigorously.

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Market for Registrant s Common Equity and Related Stockholder Matters

Price Range of Common Stock

Following the delisting of our common stock from the NYSE Alternext US as of the close of trading on January 9, 2009, our common stock has been quoted on the OTC Bulletin Board since January 21, 2009 under the symbol PRWP.OB . The high and low sale prices for our common stock as reported on the NYSE Alternext US and OTC Bulletin Board, for the periods indicated below were as follows:

	High	Low
Fiscal Year Ended December 31, 2010		
First Quarter	$ 0.50	$ 0.26
Fiscal Year Ended December 31, 2009		
First Quarter	$ 0.42	$ 0.05
Second Quarter	$ 0.59	$ 0.20
Third Quarter	$ 0.50	$ 0.27
Fourth Quarter	$ 0.44	$ 0.24
Fiscal Year Ended December 31, 2008		
First Quarter	$ 0.70	$ 0.26
Second Quarter	$ 0.48	$ 0.25
Third Quarter	$ 0.39	$ 0.17
Fourth Quarter	$ 0.30	$ 0.05

Holders of Common Stock

As of February 16, 2010, there were approximately 279 shareholders of record of our common stock. Because shares of our common stock are held by depositaries, brokers and other nominees, the number of beneficial holders of our shares is substantially larger than the number of record holders. Based on information available to us, we believe there are approximately 3,923 non-objecting beneficial owners of our shares of our common stock in addition to the record holders.

Dividends

There have been no cash dividends declared on our common stock since our company was formed. Dividends are declared at the sole discretion of our Board of Directors. Our intention is not to declare cash dividends and retain all cash for our operations. In February 2008, we issued 1,742,500 shares of Series A 12% Convertible Preferred Stock which pay dividends at the rate of 12% per share per annum payable, at our option, in cash or shares of common stock valued at the higher of $1.00 or 100% of the value weighted average price of our share price for the twenty consecutive trading dates prior to the dividend payment date. It is our intent to make the dividend payments with shares of common stock.

During 2009, we issued 900,000 shares of Series B-1 Convertible Preferred Stock and 1,330,000 shares of Series B-2 Convertible Preferred Stock, which pay dividends at the rate of 12% per share per annum payable, at our option, in cash or Common Stock valued at $0.50 as amended in August 2009. It is our intent to make the dividend payments with shares of common stock.

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Management s Discussion and Analysis of Financial Condition and Results of Operations

In addition to historical information, the following Management s Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements as defined under federal securities laws and is subject to the safe harbor created therein for forward-looking statements. Such statements include, but are not limited to, statements concerning our anticipated operating results, research and development, clinical trials, regulatory proceedings, and financial resources, and can be identified by use of words such as, for example, anticipate, estimate, expect, project, intend, plan, believe and would, should, could or may. Forward-looking statements are based on current expecta and projections about the industry and markets in which Pro-Pharmaceuticals operates, and management s beliefs and assumptions. These statements are not guarantees of future performance and involve certain known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. Such risks and uncertainties are related to, without limitation, our early stage of development, our dependence on outside capital, uncertainties of our technology and clinical trials, intellectual property litigation, uncertainties of regulatory approval requirements for our products, competition and stock price volatility in the biotechnology industry, limited trading volume for our stock, concentration of ownership of our stock, and other risks detailed herein and from time to time in our SEC reports. The following discussion should be read in conjunction with the accompanying consolidated financial statements and notes thereto of Pro-Pharmaceuticals appearing elsewhere herein.

Overview

We are a development-stage company engaged in the discovery and development of therapeutics that target Galectin receptors that we believe enhance existing cancer treatments. We believe our therapeutics could also be used in the treatment of liver, microbial and inflammatory diseases. All of our products are presently in development, including pre-clinical and clinical trials.

Since our inception on July 10, 2000, our primary focus has been the development of a new generation of anti-cancer treatments using polysaccharide polymers which are designed to increase survival and improve the quality of life for cancer patients. Our lead product candidate, DAVANAT ®, is a patented, new chemical entity that we believe, when administered in combination with chemotherapy or biologics, increases efficacy while reducing adverse side effects of the chemotherapy. We hold the patent on DAVANAT ®, which was invented by company founders David Platt, Ph.D., our former Chief Executive Officer, and Anatole Klyosov, Ph.D., our Chief Scientist.

On January 29, 2010 and March 8, 2010, we completed closings for gross proceeds of $325,000 and $335,000, respectively, (net cash proceeds of $308,00 and $322,000, respectively) of Series B-2 redeemable convertible preferred stock (Series B-2) for a total of 162,500 and 167,500 shares, respectively, of Series B-2 and warrants to purchase shares of common stock. We believe that with the funds from the January 29 and March 8, 2010 closings of the Series B-2 and unrestricted cash on hand of $251,000 at December 31, 2009, there is sufficient cash to fund operations into April 2010. We will require more cash to fund our operations and believe we will be able to obtain additional financing. However, there can be no assurance that we will be successful in obtaining such new financing or, if available, that such financing will be on terms favorable to us. If we are unsuccessful in raising additional capital before the end of April 2010, we may be required to cease operations or seek bankruptcy protection. In light of our current financial position and the uncertainty of raising sufficient capital to achieve our business plan, there is substantial doubt about our ability to continue as a going concern.

Development of DAVANAT® Technology

In 2002, the FDA granted an Investigational New Drug (IND) application for us to administer DAVANAT® in combination with 5-FU to treat late-stage cancer patients with solid tumors. 5-FU is FDA-approved, and one of the most widely used chemotherapies for treatment of various types of cancer, including colorectal, breast and gastrointestinal. We believe that using DAVANAT ® in combination with 5-FU enables greater absorption of the chemotherapy in cancer cells while reducing its toxic side effects.

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The FDA also has granted us an IND for DAVANAT® to be administered with Avastin®, 5-FU and leucovorin in a combination therapy to treat early-stage colorectal cancer patients and an IND for DAVANAT ® to be administered with 5-FU to treat early stage bile duct cancer patients. In addition, the FDA also has granted us, on a case-by-case basis, the ability to treat patients with breast cancer in response to physicians requests for so-called compassionate use .

To date, DAVANAT® has been administered to approximately 100 cancer patients. Data from a Phase II trial for end-stage colorectal cancer patients showed that DAVANAT ® in combination with 5-FU extended median survival to 6.7 months with significantly reduced side effects, as compared to 4.6 months for best standard of care as determined by the patients physicians. These clinical trials also showed that patients experienced fewer adverse side effects of the chemotherapy and required less hospitalization.

Our pre-clinical and clinical trial data also show that DAVANAT® is well tolerated, safe and non-toxic.

We believe, based on the outcome of our clinical trials to date, that DAVANAT® when co-administered with 5-FU or biological drugs is superior to the current standard of care. We also plan to file NDAs for DAVANAT ® in combination with other chemotherapeutics and biologics. Biologics are therapeutic products based on materials derived from living materials.

According to its published guidance, the FDA initially determines whether a NDA filing is complete for purposes of allowing a review, and, if allowed, then determines whether to approve the NDA, a process that takes six or ten months. Upon approval, an applicant may commence commercial marketing and distribution of the approved products. We have retained Camargo Pharmaceutical Services, LLC for regulatory support of our submission with the FDA. Camargo s expertise in regulatory affairs and submissions includes the preparation and submission of NDAs.

In May 2008, we submitted a Drug Master File (DMF) for DAVANAT® to the FDA. This is an important step toward the filing of our DAVANAT ® NDA because a DMF contains confidential detailed information in support of the NDA about facilities, processes or articles used in the chemistry, manufacturing, controls, processing, packaging, and storing or stability of drugs. We believe the DMF represents a significant milestone in our eventual commercialization of DAVANAT ® because it demonstrates our ability to produce commercial quantities of pharmaceutical-grade DAVANAT ® under current Good Manufacturing Process (cGMP) standards. A DMF can be cross-referenced by potential partners to use in combination with other therapies to expedite clinical studies and submission of NDAs.

In September 2008, we submitted a clinical and pre-clinical package to the FDA in support of our DAVANAT® NDA. The FDA reported to us in its minutes for the December 22, 2008 meeting that we will be required to conduct a Phase III trial to demonstrate superiority to the best standard of care for late stage colorectal cancer patients. As part of the Phase III trial, we plan to open the study to conduct a pharmacokinetic (PK) analysis of approximately 60 patients, which may allow us to file an NDA for DAVANAT ® as an adjuvant when administered with 5-FU. The Company expects to enroll approximately 300 patients in the Phase III trial. Adjuvants are pharmacological or immunological agents that modify the effect of other agents, such as drugs or vaccines.

Following a hearing with the NYSE Alternext US on December 23, 2008, our appeal of an earlier delisting notice was denied and our common stock ceased to trade on this exchange as of the close of trading on January 9, 2009. On January 21, 2009, our common stock began trading on the OTC Bulletin Board under the symbol PRWP.OB .

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Results of Operations from the Years Ended December 31, 2009 and 2008

Research and Development Expense

	Year ended December 31,		2009 as Compared to 2008	
	2009	2008	$Change	%Change
	(In thousands, except %)			
Research and development	$ 1,110	$ 1,774	$ (664)	(37)%

We generally categorize research and development expenses as either direct external expense, comprised of amounts paid to third party vendors for services, or all other expenses, comprised of employee payroll and general overhead allocable to research and development. We subdivide external expenses between clinical programs and pre-clinical activities. We consider a clinical program to have begun upon acceptance by the FDA, or similar agency outside of the United States, to commence a clinical trial in humans, at which time we begin tracking expenditures by the product candidate. We have one product candidate DAVANAT® in clinical trials at this time. Clinical program expenses comprise payments to vendors related to preparation for, and conduct of, all phases of the clinical trial, including costs for drug manufacture, patient dosing and monitoring, data collection and management, oversight of the trials and reports of results. Pre-clinical expenses comprise all research and development amounts incurred before human trials begin, including payments to vendors for services related to product experiments and discovery, toxicology, pharmacology, metabolism and efficacy studies, as well as manufacturing process development for a drug candidate.

Our research and development expenses for the years ended December 31, 2009 and 2008 were as follows:

	Year Ended December 31,	
	2009	2008
	(in thousands)	
Direct external expenses:		
Clinical programs	$ 114	$ 244
Pre-clinical activities	310	681
All other research and development expenses	686	849
	$ 1,110	$ 1,774

Clinical program and pre-clinical expenses for the year ended December 31, 2009, decreased compared to the same periods in 2008, due primarily to overall lower activity as a result of cost containment measures. Specifically, the overall decrease for the year ended December 31, 2009 as compared to 2008, is due to decreased stock-based compensation ($173,000), decreased compensation ($47,000) and decreased direct external expenses related to clinical programs and pre-clinical activities ($501,000). Also, during 2008, we incurred costs related to the filing of our DAVANAT ® Drug Master File with the FDA as well as expenses related to our Phase II colorectal and biliary cancer trials which were not incurred during 2009. We expect to initiate a Phase III trial as soon as we are able to raise sufficient additional funds which will serve to increase our research and development expense.

Both the time required and costs we may incur in order to commercialize a drug candidate that would result in material net cash inflow are subject to numerous variables, and therefore we are unable at this stage of our development to forecast useful estimates. Variables that make estimates difficult include the number of clinical trials we may undertake, the number of patients needed to participate in the clinical trial, patient recruitment uncertainties, trial results as to the safety and efficacy of our product, and uncertainties as to the regulatory agency response to our trial data prior to receipt of marketing approval. Moreover, the FDA or other regulatory agencies may suspend clinical trials if we or an agency believes patients in the trial are subject to unacceptable risks, or find deficiencies in the conduct of the clinical trial. Delays or rejections may also occur if governmental regulation or policy changes during our clinical trials or in the course of review of our clinical data. Due to these uncertainties, accurate and meaningful estimates of the ultimate cost to bring a product to market, the timing of costs and completion of our program and the period during which material net cash inflows will commence are unavailable at this time.

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General and Administrative Expense

	Year ended December 31,		2009 as Compared to 2008	
	2009	2008	$ Change	% Change
	(In thousands, except %)			
General and administrative	$ 4,983	$ 3,552	$ 1,431	40%

General and administrative expenses consist primarily of salaries including stock based compensation, legal and accounting fees, insurance, investor relations, business development and other office related expenses. The primary reason for the increased expense during the year ended December 3, 2009 as compared to 2008 is due to increased business development expenses ($172,000) as we increased our business development efforts, increased stock-based compensation in the form of employee options ($827,000) and increased compensation costs ($765,000) due primarily to the recognition of severance obligations related to the departure of our former chief executive officer. These expense increases were offset by decreased legal and accounting costs ($243,000).

Other Income and Expense

Other income and expense for the years ended December 31, 2009 and 2008 was a loss of $1,369,000 and a gain of $2,175,000, respectively, due primarily to the change in fair value of warrant liabilities.

Liquidity and Capital Resources

As described above in the Overview and elsewhere in this Annual Report on Form 10-K, we are in the development stage and have not generated any revenues. Since our inception on July 10, 2000, we have financed our operations from proceeds of public and private offerings of debt and equity. As of December 31, 2009, we raised a net total of $43.4 million from these offerings. At December 31, 2009, we had $251,000 of unrestricted cash and cash equivalents available to fund future operations.

On January 29, 2010 and March 8, 2010, we completed closings for gross proceeds of $325,000 and $335,000, respectively, (net cash proceeds of $308,00 and $322,000, respectively) of Series B-2 redeemable convertible preferred stock (Series B-2) for a total of 162,500 and 167,500 shares, respectively, of Series B-2 and warrants to purchase shares of common stock. We believe that with the funds from the January 29 and March 8, 2010 closings of the Series B-2 and cash on hand at December 31, 2009, there is sufficient cash to fund operations into April 2010. We will require more cash to fund our operations and believe we will be able to obtain additional financing. However, there can be no assurance that we will be successful in obtaining such new financing or, if available, that such financing will be on terms favorable to us. We are actively seeking to raise additional capital and have significantly reduced our administrative and clinical spending. If we are unsuccessful in raising additional capital before the end of April 2010, we may be required to cease operations or seek bankruptcy protection. In light of our current financial position and the uncertainty of raising sufficient capital to achieve our business plan, there is substantial doubt about our ability to continue as a going concern. Net cash used in operations decreased by $778,000 to $3,887,000 for 2009, as compared to $4,665,000 for 2008. Cash operating expenses decreased principally due to decreased research and development activities and cost containment measures during the period which required overall lower cash expenditures.

No cash was provided by or used in investing activities during 2009, essentially unchanged from the same period in 2008.

Net cash provided by financing activities was $3,820,000 during 2009 as compared to $3,655,000 during 2008, due primarily to the transactions described below.

On February 12, 2009, the initial closing date under the purchase agreement with 10X Fund LP, the Company issued and sold: (i) 900,000 shares of Series B-1 convertible preferred stock (Series B-1 redeemable convertible preferred stock or Series B-1) convertible into 3,600,000 shares of common stock; (ii) Class A-1 warrants exercisable to purchase 1,800,000 shares of common stock; (iii) Class A-2 warrants exercisable to purchase 1,800,000 shares of common stock; and (iv) Class B warrants exercisable to purchase 7,200,000 shares of common stock. Net cash proceeds from the closing of this offering was $1,548,000. Concurrent with the closing of the Series B-1 transaction, we repaid an investor $200,000 of advances received in 2008.

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During 2009, in a series of closings, the Company issued and sold to 10X Fund, LP an aggregate of: (i) 1,330,000 shares of Series B-2 convertible preferred stock (Series B-2 redeemable convertible preferred stock or Series B-2) convertible into 5,320,000 shares of common stock; (ii) Class A-1 warrants exercisable to purchase 2,660,000 shares of common stock; (iii) Class A-2 warrants exercisable to purchase 2,660,000 shares of common stock; and (iv) Class B warrants exercisable to purchase 10,640,000 shares of common stock. Net proceeds from these closings were $2,472,000 in 2009.

Payments Due Under Contractual Obligations

The following table summarizes the payments due under our contractual obligations at December 31, 2009, and the effect such obligations are expected to have on liquidity and cash flow in future periods:

	Payments due by period (in thousands)				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Operating leases	$ 434	$ 267	$ 167	$	$
Separation agreement	434	154	280		
Total payments due under contractual obligations	$ 868	$ 421	$ 447	$	$

Operating leases. On May 1, 2006, we entered into an operating lease for office space. The lease commenced on August 11, 2006, and extends for five years and terminates on September 30, 2011. The lease provides for annual base rental payments of $235,000 in the first year, increasing in each subsequent lease year to $244,000, $253,000, $263,000 and $273,000, respectively. In addition to base rental payments included in the contractual obligations table above, we are responsible for our pro-rata share of increases in the operating expenses for the building after calendar year 2006 and taxes for the building after fiscal year 2007. We have the option to extend the term of the lease for an additional five year period at the prevailing market rate at the time of exercise. In connection with this lease, a commercial bank has issued a letter of credit collateralized by cash we have on deposit with the bank of $59,000. Additionally, we have a non-cancellable lease for a car, for our former chief executive officer, which expires in January 2011 and which is included in the severance agreement line of the contractual obligations table.

Separation agreement. In February 2009, we entered into a Separation Agreement in connection with the resignation of David Platt, Ph.D., our former Chief Executive Officer and Chairman of the Board of Directors. The Separation Agreement provides that we shall continue to pay Dr. Platt his current salary at a monthly rate of $21,667 for 24 months and that we may defer payment of a portion of such salary amounts greater than $10,000 per month (so long as Dr. Platt does not receive payments of less than the salary payments being made to the Company s Chief Executive Officer). However, all deferred amounts will continue to accrue and will be payable on the earlier of (i) the Company receiving a minimum of $4.0 million of funding after February 12, 2009, or (ii) February 12, 2011. We also agreed to continue to (i) provide health and dental insurance benefits to Dr. Platt, until the first to occur of February 12, 2011 or the date Dr. Platt and his family become eligible to receive health and dental insurance benefits under the plans of a subsequent employer and (ii) make the current monthly lease payments on his automobile until February 12, 2011. We recognized the full amount of the salary, health insurance and automobile during the first quarter of 2009. The remaining liability related to this severance is reflected in accrued expenses ($154,000) and in Other long-term liabilities ($280,000) on our Consolidated Balance Sheet at December 31, 2009.

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The Separation Agreement provides for the deferral of a $1.0 million severance payment due to Dr. Platt under his employment agreement until the occurrence of any of the following milestone events: (i) the approval by the Food and Drug Administration for a new drug application (NDA) for any drug candidate or drug delivery candidate based on the DAVANAT® technology (whether or not such technology is patented); (ii) consummation of a transaction with a pharmaceutical company expected to result in at least $10.0 million of equity investment or $50 million of royalty revenue to the Company; or (iii) the renewed listing of our securities on a national securities exchange. Payment upon the events (i) and (iii) may be deferred up to nine months, and if we have insufficient cash at the time of any of such events, we may issue Dr. Platt a secured promissory note for such amount. If we file a voluntary or involuntary petition for bankruptcy, whether or not a milestone event has occurred, such event shall trigger our obligation to pay the $1.0 million with the result that Dr. Platt may assert a claim for such obligation against the bankruptcy estate. Due to the uncertainties regarding the achievement of any of the milestones as described, we have not accrued for the $1.0 million severance as of December 31, 2009. When it is deemed probable that one of the milestone events will be achieved, we will then recognize the $1.0 million severance at that time.

The Separation Agreement also provides that upon (i) the consummation of a transaction with a pharmaceutical company expected to result in at least $10.0 million of equity investment or $50.0 million of royalty revenue, we will grant Dr. Platt fully vested cashless-exercise stock options exercisable to purchase at least 300,000 shares of our common stock for ten (10) years at an exercise price not less than the fair market value of the Common Stock determined as of the date of the grant and (ii) approval by the FDA of the first NDA for any of our drug or drug delivery candidates based on DAVANAT ® technology (whether or not such technology is patented), we will grant Dr. Platt fully vested cashless stock option with identical terms to purchase at least 500,000 shares of common stock. Due to the uncertainties regarding the achievement of any of the milestones as described, we have not recognized the value of the unissued stock options as of December 31, 2009. When it is deemed probable that one of the milestone events will be achieved, we will then recognize the expense related to the issuance of the stock options at that time based on the then current fair value.

Other. We have engaged outside vendors for certain services associated with our clinical trials. These services are generally available from several providers and, accordingly, our arrangements are typically cancellable on 30 days notice.

We have engaged outside vendors for certain services associated with our clinical trials. These services are generally available from several providers and, accordingly, our arrangements are typically cancellable on 30 days notice.

Off-Balance Sheet Arrangements

We have not created, and are not a party to, any special-purpose or off-balance sheet entities for the purpose of raising capital, incurring debt or operating parts of our business that are not consolidated into our financial statements. We do not have any arrangements or relationships with entities that are not consolidated into our financial statements that are reasonably likely to materially affect our liquidity or the availability of capital resources.

Critical Accounting Policies and Estimates

Our significant accounting policies are more fully described in Note 2 to our consolidated financial statements included elsewhere in this annual report on Form 10-K. Certain of our accounting policies, however, are critical to the portrayal of our financial position and results of operations and require the application of significant judgment by our management, which subjects them to an inherent degree of uncertainty. In applying our accounting policies, our management uses its best judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Our more significant estimates include stock option and warrant liability valuations and performance vesting features of certain of these instruments, useful lives and potential impairment of property and equipment and intangible assets, accrued liabilities, deferred income taxes and cash flow. These estimates are based on our historical experience, terms of existing contracts, our observance of trends in the industry, information available from other outside sources, and on various other factors that we believe to be appropriate under the circumstances. We believe that the critical accounting policies discussed below involve more complex management judgment due to the sensitivity of the methods, assumptions and estimates necessary in determining the related asset, liability, revenue and expense amounts.

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Intangible Assets. Intangible assets include patent costs, consisting primarily of related legal fees, which are capitalized as incurred and amortized over an estimated useful life of five years from issuance. We review the intangible assets for potential impairment on an annual basis or whenever events or changes in circumstances indicate that the asset may be impaired.

Accrued Expenses. As part of the process of preparing our consolidated financial statements, we are required to estimate accrued expenses. This process involves identifying services that third parties have performed on our behalf and estimating the level of service performed and the associated cost incurred on these services as of each balance sheet date in our consolidated financial statements. Examples of estimated accrued expenses include contract service fees in conjunction with pre-clinical and clinical trials, professional service fees, such as those arising from the services of attorneys and accountants and accrued payroll expenses. In connection with these service fees, our estimates are most affected by our understanding of the status and timing of services provided relative to the actual services incurred by the service providers. In the event that we do not identify certain costs that have been incurred or we under- or over-estimate the level of services or costs of such services, our reported expenses for a reporting period could be understated or overstated. The date on which certain services commence, the level of services performed on or before a given date, and the cost of services are often subject to our judgment. We make these judgments based upon the facts and circumstances known to us in accordance with accounting principles generally accepted in the U.S.

Warrants. We have issued common stock warrants in connection with the execution of certain equity and debt financings and consulting agreements. Certain warrants are accounted for as derivative liabilities at fair value. Such warrants do not meet the criteria that a contract should not be considered a derivative instrument if it is (1) indexed to its own stock and (2) classified in stockholders equity. Changes in fair value of derivative liabilities are recorded in the consolidated statement of operations under the caption Change in fair value of warrant liabilities. Warrants that are not considered derivative liabilities are accounted for at fair value at the date of issuance in additional paid-in capital. The fair value of warrants is determined using the Black-Scholes option-pricing model using assumptions regarding volatility of our common share price, remaining life of the warrant, and risk-free interest rates at each period end.

Stock-Based Compensation. Through December 31, 2005, we accounted for stock-based compensation to employees and non-employee directors under the intrinsic value method under which no compensation expense was recognized for stock options granted at fair market value and with fixed terms. On January 1, 2006, we adopted rules requiring companies to recognize stock-based compensation awards as compensation expense on a fair value method. These rules were adopted using the modified prospective method, which applied the rules to the consolidated financial statements on a going-forward basis. Under the fair value recognition provisions, stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the service period, which generally represents the vesting period. For awards that have performance based vesting conditions we recognize the expense over the estimated period that the awards are expected to be earned. We use the Black-Scholes option-pricing model to calculate the grant date fair value of stock options. The expense recognized over the service period is required to include an estimate of the awards that will be forfeited. Previously, we recorded the impact of forfeitures as they occurred.

Recent Accounting Pronouncements

In June 2009, the Financial Accounting Standards Board (FASB) issued the FASB Accounting Standards Codification (the Codification) as the single source of authoritative U.S. GAAP recognized by the FASB to be applied by nongovernmental entities in preparation of financial statements in conformity with U.S. GAAP. While the adoption of the Codification as of September 30, 2009 changes how the Company references accounting standards, the adoption did not have an impact on its financial position, results of operations, or cash flows.

On January 1, 2009, the principles and requirements for how an acquirer of a business recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree and the goodwill acquired were revised. Disclosure requirements were also established, which will enable financial statement users to evaluate the nature and financial effects of business combinations. Among other things, the amendments to the accounting principles and requirements expand the definitions of a business and business combination, require recognition of contingent consideration at fair value on the acquisition date and require acquisition-related transaction costs to be expensed as incurred. The adoption of these amendments did not have a significant impact on the Company s financial position, results of operations, or cash flows.

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On January 1, 2009, the Company adopted the fair value measurements and disclosures provisions for nonfinancial assets and nonfinancial liabilities, which were previously deferred. These provisions establish a framework for measuring fair value and expand financial statement disclosures about fair value measurements. Items to which these provisions apply include nonrecurring fair value measurements of nonfinancial assets and nonfinancial liabilities, or recurring fair value measurements of nonfinancial assets and nonfinancial liabilities, which are not disclosed at fair value in the consolidated financial statements. The Company did not have nonfinancial assets or nonfinancial liabilities covered by these provisions which required remeasurement upon adoption or during the year ended December 31, 2009, and therefore there was no impact of adoption on its financial position, results of operations, or cash flows.

On January 1, 2009, the Company adopted the accounting standard for ownership interests in subsidiaries held by parties other than the parent, which establishes accounting for the amount of consolidated net income attributable to the parent and to the noncontrolling interest, changes in a parent s ownership interest and the valuation of retained noncontrolling equity investments when a subsidiary is deconsolidated. This accounting standard also establishes reporting requirements that provide enhanced disclosures that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. The impact of adopting this accounting standard on the Company s financial position, results of operations, and cash flows was not significant.

On January 1, 2009, the Company adopted amendments to the accounting standard addressing derivatives and hedging. The amendments change the disclosure requirements for derivative instruments and hedging activities, requiring enhanced disclosures about how and why an entity uses derivative instruments, how instruments are accounted for under U.S. GAAP, and how derivatives and hedging activities affect an entity s financial position, financial performance and cash flows. The adoption of these amendments required additional disclosure only, and therefore did not have an impact on the Company s financial position, results of operations, or cash flows.

On January 1, 2009, the Company adopted amendments to the accounting standard addressing intangibles, goodwill and other assets. The amendments provided new guidance to improve the consistency between the useful life of a recognized intangible asset and the period of expected cash flows used to measure the fair value of the asset under U.S. GAAP. The adoption of these amendments did not have a significant impact on the Company s financial position, results of operations, or cash flows.

On June 30, 2009, the Company adopted amendments to the accounting standard for financial instruments. The amendments require disclosures about the fair value of financial instruments in interim as well as in annual financial statements. The adoption of these amendments has resulted in additional disclosures only in the Company s interim financial statements, and therefore did not impact its financial position, results of operations or cash flows.

On June 30, 2009, the Company adopted amendments to the accounting standard addressing subsequent events. The amendments provide guidance to establish general standards of accounting for and disclosures of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. The amendments require entities to disclose the date through which subsequent events were evaluated as well as the rationale for why that date was selected. This disclosure should alert all users of financial statements that an entity has not evaluated subsequent events after that date in the set of financial statements being presented. The amendments required additional disclosures only, and therefore did not have an impact on our financial position, results of operations, or cash flows. The Company has evaluated events and transactions that occurred between December 31, 2009 and the date of this filing. During this period, the Company did not have any material subsequent events that impacted the Company s consolidated financial statements.

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DIRECTORS AND EXECUTIVE OFFICERS

Board of Directors:

Name	Age as of 3/12/10	Position
Gilbert F. Amelio, Ph.D.	67	Director
James C. Czirr	56	Executive Chairman
Arthur R. Greenberg	63	Director
Rod D. Martin	40	Vice Chairman
S. Colin Neill	63	Director
Steven Prelack	52	Director
Jerald K. Rome	75	Director
Peter G. Traber, M.D.	54	Director
Theodore D. Zucconi	63	Chief Executive Officer, President and Director

Dr. Amelio was appointed a director on February 12, 2009. Dr. Amelio, who began his career at Bell Labs, is Senior Partner of Sienna Ventures, a privately-held venture capital firm, and has acted in this capacity since 2001. Dr. Amelio was Chairman and Chief Executive Officer of Jazz Technologies, Inc., a specialty wafer foundry, from 2005 until his retirement in 2008, when he was named Chairman Emeritus. Dr. Amelio was Chairman and Chief Executive Officer of Beneventure Capital, LLC, a venture capital firm from 1999 to 2005 and was Principal of Aircraft Ventures, LLC, a consulting firm from 1997 to 2004. Dr. Amelio was elected a Director of AT&T (NYSE: T) in 2001 and had previously served as an Advisory Director of AT&T from 1997 to 2001. He served as a Director of Pacific Telesis Group from 1995 until the company was acquired by AT&T in 1997. Dr. Amelio was chief executive officer of Apple, Inc. in 1996 and 1997, and from 1991 to 1996, he was chief executive officer of National Semiconductor Corporation. He was a director of Chiron, now a part of Novartis, from 1991 to 1996. We believe Dr. Amelio s qualifications to sit on our Board of Directors include his executive leadership and management experience, as well as his extensive experience with global companies, his financial expertise and his years of experience providing strategic advisory services to complex organizations.

Mr. Czirr, a Series B director, was appointed a director and became Chairman of the Board of Directors on February 12, 2009 and Executive Chairman of the Board on February 11, 2010. Mr. Czirr, age 56, is a co-founder of 10X Fund, L.P. and is a managing member of 10X Capital Management LLC, the general partner of 10X Fund, L.P. Mr. Czirr was a co-founder of Pro-Pharmaceuticals in July 2000. Mr. Czirr was instrumental in the early stage development of Safe Science Inc., a developer of anti-cancer drugs, served from 2005 to 2008 as Chief Executive Officer of Minerva Biotechnologies Corporation, a developer of nano particle bio chips to determine the cause of solid tumors, and was a consultant to Metalline Mining Company Inc. (NYSE Alternext US: MMG), a mineral exploration company seeking to become a low cost producer of zinc. Mr. Czirr received a B.B.A. degree from the University of Michigan. We believe Mr. Czirr s qualifications to sit on our Board of Directors include his extensive experience with developing entrepreneurial biotech companies, his financial expertise and his years of experience providing strategic advisory services to development stage organizations.

Mr. Greenberg was appointed a director in August 2009. With 37 successful years in the semiconductor equipment and materials industries, Mr. Greenberg is the President and Founder of Prism Technologies, Inc. Prism provides professional sales & marketing services and business development consulting services. Mr. Greenberg is a member of the board of UV Tech Systems, a designer and manufacturer of equipment used to fabricate semiconductor devices. Previously, he was the first President of SEMI, North America, a semiconductor equipment and materials industry trade association representing the interests, including public policy, of more than 2000 members doing business in North America. Mr. Greenberg received his Bachelor of Science degree in Business Administration from Henderson State University. We believe Mr. Greenberg s qualifications to serve on our Board of Directors include his experience in leading technology enterprises, as well as his experience as a CEO of a technology company.

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Mr. Martin, a Series B director, was appointed a director and became a member of the Nominating and Corporate Governance Committee and of the Compensation Committee on February 12, 2009. Mr. Martin was appointed Vice Chairman of the Board on February 11, 2010. Mr. Martin, age 40, is a co-founder of 10X Fund, L.P. and is a managing member of 10X Capital Management LLC, the general partner of 10X Fund, L.P. Mr. Martin served as a senior advisor to PayPal, Inc. founder Peter Thiel, during the period in which the company conducted its initial public offering and was subsequently acquired by eBay Inc., and afterward, served at Clarium Capital, a global macro hedge fund which has more than $5 billion under management. Mr. Martin also served as Director of Policy Planning & Research for former Arkansas Governor and presidential candidate Mike Huckabee. He is a widely noted author and speaker, and leads several non-profit organizations. Mr. Martin holds a J.D. from Baylor Law School and B.A. from the University of Arkansas. We believe Mr. Martin s qualifications to sit on our Board of Directors include his extensive experience with developing entrepreneurial technology companies and his years of experience providing strategic legal and advisory services to development stage organizations.

Mr. Neill, a director since May 2007, became President of Pharmos Corp. (PARS.PK) in 2008, and since 2006, was its Senior Vice President, Chief Financial Officer, Secretary, and Treasurer. From 2003 to 2006, Mr. Neill served as Chief Financial Officer, Treasurer and Secretary of Axonyx Inc., a biopharmaceutical company that developed products and technologies to treat Alzheimer s disease and other central nervous system disorders. Mr. Neill served as Senior Vice President, Chief Financial Officer, Secretary and Treasurer of ClinTrials Research Inc., a global contract research organization in the drug development business, from 1998 to 2001. From 2001 to 2003, Mr. Neill served as an independent consultant assisting start-up and development stage companies in raising capital. Earlier experience was gained as Vice President Finance and Chief Financial Officer of BTR Inc., a U.S. subsidiary of BTR plc, a British diversified manufacturing company, and Vice President Financial Services of The BOC Group Inc., a British owned industrial gas company with substantial operations in the health care field.

Mr. Neill served four years with American Express Travel Related Services, first as chief internal auditor for worldwide operations and then as head of business planning and financial analysis. Mr. Neill began his career in public accounting with Arthur Andersen LLP in Ireland and later with Price Waterhouse LLP as a senior manager in New York City. He also served with Price Waterhouse for two years in Paris, France. Mr. Neill graduated from Trinity College, Dublin with a first class honors degree in business/economics and he holds a masters degree in Accounting and Finance from the London School of Economics. He is a Certified Public Accountant in New York State and a Chartered Accountant in Ireland. We believe Mr. Neill s qualifications to sit on our Board of Directors include his executive leadership and management experience, as well as his financial expertise with public and financial accounting matters for technology and life science organizations.

Mr. Prelack, a director since April 2003, has served as Senior Vice President, Chief Financial Officer and Treasurer of VelQuest Corporation since 2001, a provider of automated compliance software solutions for the pharmaceutical industry. In this capacity, Mr. Prelack oversees sales, business development, operations and finance. Mr. Prelack is a director of Codeco Corporation, a designer and manufacturer of custom resisters and switches, and is a member of the Strategic Advisory Board of BioVex, a Biotechnology company focused on cancer. Mr. Prelack served as Director and Audit Committee Chair for BioVex from 2007 through 2009. Mr. Prelack, a Certified Public Accountant, received a B.B.A. degree from the University of Massachusetts at Amherst in 1979. We believe Mr. Prelack s qualifications to sit on our Board of Directors include his extensive experience with public and financial accounting matters for technology organizations.

Mr. Rome, a director since March 2004, has been a private investor since 1996. Mr. Rome founded Amberline Pharmaceutical Care Corp., a marketer of non-prescription pharmaceuticals, in 1993 and served as its President from 1993 to 1996. From 1980 to 1990, he served as Chairman, President and Chief Executive Officer of Moore Medical Corp., a national distributor of branded pharmaceuticals and manufacturer and distributor of generic pharmaceuticals and was previously Executive Vice President of the H.L. Moore Drug Exchange, a division of Parkway Distributors and predecessor of Moore Medical Corp. Mr. Rome received a B.S. degree in pharmaceutical sciences from the University of Connecticut. We believe Mr. Rome s qualifications to serve on our Board of Directors include his experience as a CEO of a pharmaceutical company, as well as his executive management and corporate governance expertise.

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Dr. Traber was appointed a director on February 12, 2009. Dr. Traber is Chair of the Board and Chief Executive Officer of TerraSep, LLC, a Mountain View, CA biotechnology start-up company. Dr. Traber is President Emeritus, and from 2003 to 2008 was Chief Executive Officer, of Baylor College of Medicine. From 2000 to 2003 he was Senior Vice President Clinical Development and Regulatory Affairs and Chief Medical Officer of GlaxoSmithKline plc. He has also served as Chief Executive Officer of the University of Pennsylvania Health System, as well as Chair of the Department of Internal Medicine and Chief of Gastroenterology for the University of Pennsylvania School of Medicine. Dr. Traber received his M.D. from Wayne State School of Medicine and a B.S. in chemical engineering from the University of Michigan. We believe Dr. Traber s qualifications to sit on our Board of Directors include his years of medical experience in the pharmaceutical and healthcare industries, as well as the deep understanding of our patients and our products.

Dr. Zucconi, a director since 2007, was named our Chief Executive Officer and President on February 12, 2009, and served as its President from October 2007 to December 31, 2008. From 2002 to 2007, Dr. Zucconi was President of Implementation Edge, a management consulting firm that specializes in organizational performance improvement. From 1994 until 2002, Dr. Zucconi served in various senior management capacities at Motorola, including Director of Motorola University. Prior to Motorola, Dr. Zucconi held technical, operational, and senior management positions at high technology companies, including IBM and Nortel Networks. Dr. Zucconi led a number of successful turnaround projects. Dr. Zucconi received a B.S. degree in Chemistry from Villanova University, an M.S. degree in Chemistry from the University of Connecticut and a Ph.D. in analytical chemistry from State University of New York in 1977. Dr. Zucconi also received a Master s Certificate in international management from Thunderbird University and is a certified project manager from Stanford University. We believe Dr. Zucconi s qualifications to sit on our Board of Directors include his three decades of technical, operational and management experience with technology companies, including three years as our President.

Executive officers and key employees:

Theodore Zucconi, Ph.D., Chief Executive Officer and President (see Board of Directors)

Anatole Klyosov, Ph.D., D.Sc., our Chief Scientist, is a co-inventor of our patented technology and a founder of Pro-Pharmaceuticals. Dr. Klyosov was vice president, research and development for Kadant Composites, Inc., a subsidiary of Kadant, Inc. (KAI-NYSE), where he directed, since 1996, a laboratory performing work in biochemistry, microbiology and polymer engineering. From 1990 to 1998, Dr. Klyosov was visiting professor of biochemistry, Center for Biochemical and Biophysical Sciences, Harvard Medical School, and from 1981 to 1990 he was professor and head of the Carbohydrates Research Laboratory at the A.N. Bach Institute of Biochemistry, USSR Academy of Sciences. Dr. Klyosov was elected as a member of the World Academy of Art and Sciences and is the recipient of distinguished awards including the USSR National Award in Science and Technology. He has published more than 250 peer-reviewed articles in scientific journals, authored books on enzymes, carbohydrates, and biotechnology, edited two books: *Carbohydrates in Drug Design* and *Galectins*, and holds more than 20 patents. Dr. Klyosov earned his Ph.D. and D.Sc. degrees in physical chemistry, and an M.S. degree in enzyme kinetics, from Moscow State University.

Eliezer Zomer, Ph.D., is Executive Vice President of Manufacturing and Product Development. Prior to joining our company, Dr. Zomer had been the founder of Alicon Biological Control, where he served from November 2000 to July 2002. From December 1998 to July 2000, Dr. Zomer served as Vice President of product development at SafeScience, Inc. and Vice President of Research and Development at Charm Sciences, Inc. from June 1987 to November 1998. Dr. Zomer received a B.Sc. degree in industrial microbiology from the University of Tel Aviv in 1972, a Ph.D. in biochemistry from the University of Massachusetts in 1978, and undertook a post-doctoral study at the National Institute of Health.

Anthony D. Squeglia became our Chief Financial Officer in October 2007 and from 2003 served as our Vice President of Investor Relations. From 2001 to 2003, Mr. Squeglia was a Partner in JFS Advisors, a management consulting firm that delivered strategic services to entrepreneurial businesses that includes raising capital, business planning, positioning, branding, marketing and sales channel development.

From 1996 to 2001, Mr. Squeglia was Director of Investor Relations and Corporate Communications for Quentra/Coyote Networks. Previously, Mr. Squeglia held management positions with Summa Four, Unisys, AT&T, Timeplex, Colonial Penn and ITT. Mr. Squeglia received an M.B.A. from Pepperdine University and a B.B.A. from The Wharton School, University of Pennsylvania.

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Maureen Foley has been our Chief Operating Officer since October 2001 and was formerly our Manager of Operations and acting Chief Financial Officer. She has provided 30 years of business and operations management experience including facility design, construction, and fit out, project management, IT, HR, press and public relations, accounting and finance to startup companies. Between 1999 and 2000 she managed business operations for eHealthDirect, Inc., a developer of medical records processing software; and ArsDigita, Inc., a web development company. From 1996 to 1999, she served as Manager of Operations with Thermo Fibergen, Inc., a developer of composite materials and a subsidiary of Thermo Fisher Scientific, Inc. Ms. Foley is a graduate of The Wyndham School, Boston, Massachusetts, with a major in Mechanical Engineering. Ms. Foley serves as Secretary to the Board.

None of the directors, executive officers and key employees shares any familial relationship.

Independence of Directors

The Company s Corporate Governance provides that a majority of the members of the Board, and each member of the Audit, Compensation and Nominating and Corporate Governance Committees, must meet certain criteria for independence. Based on the New York Stock Exchange independence requirements, the Company s Corporate Governance practices assist the Board in its determination of director independence.

Based on the New York Stock Exchange rules, Messrs. Czirr, Martin, Greenberg, Neill, Prelack, Rome and Drs. Amelio and Traber were affirmatively determined by the Board to be independent. Due to Dr. Zucconi s employment with the Company, he is not considered independent. Also, none of the non-employee directors has any relationship with the Company other than being a director and stockholder, or any transaction or arrangement that interferes with each director s independence.

Policies with Respect to Transactions with Related Persons

The Nominating and Corporate Governance Committee and the Board have adopted a Code of Ethics, which is available at www.pro-pharmaceuticals.com, that sets forth various policies and procedures intended to promote the ethical behavior of the Company s employees, officers and directors. The Code of Ethics describes the Company s policy on conflicts of interest. The Nominating and Corporate Governance Committee monitors the ethical behavior of the Company s employees, officers and directors.

The executive officers and the Board are also required to complete a questionnaire on an annual basis which requires them to disclose any related person transactions and potential conflicts of interest. The responses to these questionnaires are reviewed by outside corporate counsel, and, if a transaction is reported by an independent director or executive officer, the questionnaire is submitted to the Chairperson of the Audit Committee for review. If necessary, the Audit Committee will determine whether the relationship is material and will have any effect on the director s independence. After making such determination, the Audit Committee will report its recommendation on whether the transaction should be approved or ratified by the entire Board.

Certain Relationships and Related Transactions

Since the beginning of fiscal 2008 and during 2009, the Company did not participate in any transactions in which any of the director nominees, Class B directors, executive officers, any beneficial owner of more than 5% of the Company s common stock, nor any of their immediate family members, had a direct or indirect material interest

Director Nomination Process

The Nominating Committee is responsible for, among other things, screening potential director candidates and recommending qualified candidates to the Board for nomination.

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When identifying and evaluating candidates, the Nominating Committee first determines whether there are any evolving needs of the Board that require an expert in a particular field. The Nominating Committee may retain a third-party search firm to assist the Committee in locating qualified candidates that meet the needs of the Board at that time. The search firm provides information on a number of candidates, which the Nominating Committee discusses. The Nominating Committee chair and some or all of the members of the Nominating Committee, and the Chief Executive Officer, will interview potential candidates that the Nominating Committee deems appropriate. If the Nominating Committee determines that a potential candidate meets the needs of the Board, has the qualifications, and meets the independence standards required by the New York Stock Exchange, it will recommend the nomination of the candidate to the Board.

It is the Nominating Committee s policy to consider director candidates recommended by stockholders, if such recommendations are properly submitted to the Company. Stockholders wishing to recommend persons for consideration by the Nominating Committee as nominees for election to the Board can do so by writing to the Secretary of Pro-Pharmaceuticals, Inc. at 7 Wells avenue, Suite 34, Newton, MA 02459. Recommendations must include the proposed nominee s name, biographical data and qualifications, as well as a written statement from the proposed nominee consenting to be named and, if nominated and elected, to serve as a director. Recommendations must also follow the Company s procedures for nomination of directors by stockholders (see Nominating and Corporate Governance Committee Criteria and Diversity) as provided in our Certificate of Incorporation and By-laws. The Nominating Committee will consider the candidate and the candidate s qualifications in the same manner in which it evaluates nominees identified by the Nominating Committee. The Nominating Committee may contact the stockholder making the nomination to discuss the qualifications of the candidate and the stockholder s reasons for making the nomination. The Nominating Committee may then interview the candidate if it deems the candidate to be appropriate. The Nominating Committee may use the services of a third-party search firm to provide additional information about the candidate prior to making a recommendation to the Board.

The Nominating Committee s nomination process is designed to ensure that the Nominating Committee fulfills its responsibility to recommend candidates that are properly qualified to serve the Company for the benefit of all of its stockholders, consistent with the standards established by the Nominating Committee under the Company s Corporate Governance Principles.

Communication with the Board

The Board and management encourage communication from the Company s stockholders. Stockholders who wish to communicate with the Company s management should direct their communication to the Secretary of the Board, 7 Wells Avenue, Suite 34, Newton, MA 02459. Stockholders, or other interested parties, who wish to communicate with the non-management directors or any individual director should direct their communication c/o the Secretary at the address above. The Secretary will forward communications intended for the Board to the Vice Chairman of the Board, or, if intended for an individual director, to that director. If multiple communications are received on a similar topic, the Secretary may, in her discretion, forward only representative correspondence. Any communications that are abusive, in bad taste or present safety or security concerns may be handled differently.

Board Leadership Structure

The Board believes that the Company s Executive Chairman is best situated to serve as Chairman because he is the director who was a co-founder and is very familiar with the Company s business and industry, and capable of effectively identifying sources of capital as well as strategic priorities. Independent directors and management have different perspectives and roles in strategy development. The Company s independent directors bring experience, oversight and expertise from outside the company and industry. The Chief Executive Officer brings company-specific experience and expertise. The Board believes that the separate roles of the Executive Chairman and Chief Executive Officer promotes strategy development and execution, and facilitates information flow between management and the Board, which are essential to effective governance.

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One of the key responsibilities of the Board is to develop strategic direction and hold management accountable for the execution of strategy once it is developed. The Board believes the separate roles of the Executive Chairman and the Chief Executive Officer is in the best interest of stockholders because it provides the appropriate balance between strategy development and independent oversight of management.

Executive Sessions

Pursuant to the Company s Corporate Governance Principles, non-management directors of the Board are required to meet on a regularly scheduled basis without the presence of management. The Executive Chairman chairs these sessions.

Meeting Attendance

Last year there were ten meetings of the Board. Each director attended at least 75% of the total meetings of the Board and committees of the Board of which the director was a member. In addition to participation at Board and committee meetings, our directors discharge their responsibilities throughout the year through personal meetings and other communications, including considerable telephone contact with the Executive Chairman and Chief Executive Officer and others regarding matters of interest and concern to the Company.

The Company does not have a formal policy requiring members of the Board to attend the Annual Meeting, although all directors are strongly encouraged to attend. All nine directors were present at the 2009 Annual Meeting of Stockholders.

Risk Management

The Board has an active role, as a whole and also at the committee level, in overseeing management of the Company s risks. The Board regularly reviews information regarding the Company s credit, liquidity and operations, as well as the risks associated with each. The Company s Compensation Committee is responsible for overseeing the management of risks relating to the Company s executive compensation plans and arrangements. The Audit Committee oversees management of financial risks. The Nominating and Corporate Governance Committee manages risks associated with the independence of the Board of Directors and potential conflicts of interest. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire Board of Directors is regularly informed through committee reports about such risks.

Board Committees

The Board has established an Audit Committee, a Compensation Committee, and a Nominating and Corporate Governance Committee. The Audit, Compensation, and Nominating and Corporate Governance Committees are composed entirely of independent directors, as defined under the New York Stock Exchange Corporate Governance Principles. The charters of each committee are available on the Company s website at www.pro-pharmaceuticals.com.

Board of Directors Meetings and Committees of the Board

Our Board of Directors has determined that all of the directors named in this Proxy Statement are, and all of the former directors who served during our last fiscal year, were independent within the meaning of the rules of the New York Stock Exchange., other than Dr. Zucconi, who does not serve on a standing committee. During the year ended December 31, 2009, our Board of Directors held ten meetings.

We held at least one meeting of the Board during 2009 which was attended only by the independent (non-management) directors.

During 2009, the Board of Directors had three standing committees: the Compensation Committee, the Audit Committee and the Nominating and Corporate Governance Committee. Each of the Compensation Committee, Audit Committee and Nominating and Corporate Governance Committee has a charter, a copy of which is available in the About the Company section of our website at *www.pro-pharmaceuticals.com.*

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Compensation Committee

The Compensation Committee met three times in 2009. The members of this committee are Rod D. Martin (chair), Gilbert F. Amelio, Ph.D. and Arthur R. Greenberg. The Committee is responsible for reviewing and recommending compensation policies and programs, management and corporate goals, as well as salary and benefit levels for our executive officers and other significant employees. Its specific responsibilities include supervising and overseeing the administration of our incentive compensation and stock programs and, as such, the Committee is responsible for administration of grants and awards to directors, officers, employees, consultants and advisors under Pro-Pharmaceuticals 2001 Stock Incentive Plan, 2003 Non-employee Director Stock Incentive Plan and the 2009 Incentive Compensation Plan.

Audit Committee

The Audit Committee met four times in 2009. The members of this committee are Steven Prelack (chair), Jerald K. Rome and S. Colin Neill. The Audit Committee is responsible for oversight of the quality and integrity of the accounting, auditing and reporting practices of Pro-Pharmaceuticals. More specifically, it assists the Board of Directors in fulfilling its oversight responsibilities relating to (i) the quality and integrity of our financial statements, reports and related information provided to stockholders, regulators and others, (ii) our compliance with legal and regulatory requirements, (iii) the qualifications, independence and performance of our independent registered public accounting firm, (iv) the internal control over financial reporting that management and the Board have established, and (v) the audit, accounting and financial reporting processes generally. The Committee is also responsible for review and approval of related-party transactions. The Board has determined that Mr. Prelack is an audit committee financial expert within the meaning of SEC rules.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee meet once in 2009. The members of this committee are Rod D. Martin (chair), Jerald K. Rome and Gilbert F. Amelio, Ph.D. The Nominating and Corporate Governance Committee is responsible for identifying individuals qualified to become members of the Board, and to recommend to the Board, candidates for election or re-election as directors and for reviewing our governance policies in light of the corporate governance rules of the SEC. Under its charter, the Nominating and Corporate Governance Committee is required to establish and recommend criteria for service as a director, including matters relating to professional skills and experience, board composition, potential conflicts of interest and manner of consideration of individuals proposed by management or stockholders for nomination. The Committee believes candidates for the Board should have the ability to exercise objectivity and independence in making informed business decisions; extensive knowledge, experience and judgment; the highest integrity; loyalty to the interests of Pro-Pharmaceuticals and its stockholders; a willingness to devote the extensive time necessary to fulfill a director s duties; the ability to contribute to the diversity of perspectives present in board deliberations, and an appreciation of the role of the corporation in society. The Committee will consider candidates meeting these criteria who are suggested by directors, management, stockholders and other advisers hired to identify and evaluate qualified candidates.

Criteria and Diversity

In considering whether to recommend any candidate for inclusion in the Board s slate of recommended director nominees, including candidates recommended by shareholders, the Nominating and Corporate Governance Committee will apply the criteria set forth in governance guidelines. These criteria include the candidate s integrity, business acumen, age, experience, commitment, diligence, conflicts of interest and the ability to act in the interests of all shareholders. Our guidelines specify that the value of diversity on the Board should be considered by the Nominating and Corporate Governance Committee in the director identification and nomination process. The Committee seeks nominees with a broad diversity of experience, professions, skills, geographic representation and backgrounds. The Committee does not assign specific weights to particular criteria and no particular criterion is necessarily applicable to all prospective nominees. Pro-Pharmaceuticals believes that the backgrounds and qualifications of the directors, considered as a group, should provide a significant composite mix of experience, knowledge and abilities that will allow the Board to fulfill its responsibilities. Nominees are not discriminated against on the basis of race, religion, national origin, sexual orientation, disability or any other basis proscribed by law.

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The Committee has adopted a policy for stockholders to submit recommendations for director candidates. A stockholder desiring to make a recommendation may do so in writing by letter to the Nominating and Corporate Governance Committee stating the reasons for the recommendation and how the candidate may meet the Committee s director selection criteria. The letter may be confidential and should be addressed to the Chairman of the Nominating and Corporate Governance Committee, c/o Anthony D. Squeglia, Chief Financial Officer, Pro-Pharmaceuticals, Inc., 7 Wells Avenue, Newton, Massachusetts 02459. The Committee will evaluate stockholder-recommended candidates in the same manner as candidates recommended by other persons.

Attendance of Board Members at the Annual Meeting

We encourage, but do not require, our Board members to attend the annual meeting of stockholders. All nine members of the Board attended our 2009 annual meeting.

COMPENSATION OF NAMED EXECUTIVE OFFICERS

The following table summarizes the compensation paid to our Named Executive Officers for the fiscal years ended December 31, 2009 and 2008.

Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)[1]	All Other Compensation ($)	Total ($)
Theodore D. Zucconi, Ph.D.,	2009	111,988	10,000	905,736	53,737[4]	1,081,461
Chief Executive Officer & President[2]	2008	137,169		48,215	39,502[5]	224,886
David Platt, Ph.D.,						
Chief Executive Officer[3]	2009	14,000		41,605		