



2,857,143 Shares of common stock
2,222,222 Series I common stock warrants
1,866,666 Series II common stock warrants
1,555,555 Series III common stock warrants
5,644,443 shares of common stock issuable upon exercise of the warrants

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering up to 2,857,143 shares of our common stock, par value \$0.0001 per share, Series I common stock purchase warrants to purchase up to 2,222,222 shares of our common stock ("Series I Warrants"), Series II common stock purchase warrants to purchase up to 1,866,666 shares of our common stock ("Series II Warrants") and Series III common stock purchase warrants to purchase up to 1,555,555 shares of our common stock ("Series III Warrants") and together with the Series I Warrants and Series II Warrants, the "Warrants"). The Series I Warrants have an initial exercise price of \$1.05 per share, and may be exercised at any time and from time to time on or after the date of delivery of the Series I Warrants through and including the 90th day after the closing date. The Series II Warrants have an exercise price of \$1.25 per share, and may be exercised at any time and from time to time on or after the six-month anniversary of the closing date of this offering and through and including the third anniversary of the closing date. The Series III Warrants have an exercise price of \$1.50 per share, and may be exercised at any time and from time to time on or after the six-month anniversary of the closing date of this offering and through and including the fifth anniversary of the closing date. The securities offered hereby will be issued as units, with each unit comprising one common share, a Series I Warrant to purchase 0.778 shares of our common stock, a Series II Warrant to purchase 0.653 shares of our common stock and a Series III Warrant to purchase 0.544 shares of our common stock.

Our common stock is listed on the NYSE Amex (formerly the NYSE Alternext US or American Stock Exchange) under the symbol "RNN". The last reported sale price of our common stock on the NYSE Amex on May 19, 2009 was \$1.39 per share.

We have retained Rodman & Renshaw, LLC as our exclusive placement agent to use its best efforts to solicit offers to purchase our units in this offering. In addition to the placement agent's fee below, we have also agreed to issue the placement agent warrants to purchase up to an aggregate of 142,857 shares of our common stock at an exercise price of \$1.3125 per share. See "Plan of Distribution" beginning on page S-16 of this prospectus supplement for more information regarding these arrangements.

	Per Unit	Total
Public offering price of units	\$ 1.05	\$ 3,000,000
Placement agent fees	\$ 0.063	\$ 180,000
Proceeds, before expenses, to Rexahn Pharmaceuticals, Inc.	\$	\$ 2,820,000

The placement agent is not purchasing or selling any of our units pursuant to this prospectus supplement or the accompanying prospectus, nor are we requiring any minimum purchase or sale of any specific number of units. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual public offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above.

We have applied to list the shares (but not the warrants) being sold in this offering on the NYSE Amex. There can be no assurances that the NYSE Amex will grant the application. We expect that delivery of the units being offered pursuant to this prospectus supplement will be made to purchasers on or about _____, 2009.

Investing in our securities involves a high degree of risk and the purchasers of the securities may lose their entire investment. See "Risk Factors" beginning on page S-4 to read about factors you should consider before buying our securities.

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

The date of this prospectus supplement is May 20, 2009

You should rely only on the information contained in this prospectus supplement, the accompanying prospectus, any related free writing prospectus issued by us (which we refer to as a “*company free writing prospectus*”) and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus or to which we have referred you. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus supplement, the accompanying prospectus and any related company free writing prospectus do not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus supplement, the accompanying prospectus and any related company free writing prospectus in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer or solicitation of an offer in such jurisdiction. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus and any related company free writing prospectus or any document incorporated by reference is accurate as of any date other than the date on the front cover of the applicable document. Neither the delivery of this prospectus supplement, the accompanying prospectus and any related company free writing prospectus nor any distribution of securities pursuant to this prospectus supplement and the accompanying prospectus shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated by reference into this prospectus supplement, the accompanying prospectus and any related company free writing prospectus or in our affairs since the date of this prospectus supplement. Our business, financial condition, results of operations and prospects may have changed since that date.

TABLE OF CONTENTS

	Page
Prospectus supplement	
Summary	S-1
Risk Factors	S-4
Use of Proceeds	S-13
Dilution	S-14
Plan of Distribution	S-16
Description of Warrants	S-17
Incorporation of Certain Documents by Reference	S-20
Where You Can Find More Information	S-20
Legal Matters	S-21
Accompanying prospectus	
Summary	1
Risk Factors	3
Special Note Regarding Forward-Looking Statements	3
About this Prospectus	3
Use of Proceeds	4
Plan of Distribution	4
Description of Debt Securities	6
Description of Common Stock	12
Description of Preferred Stock	14
Description of Warrants	15
Incorporation of Certain Documents by Reference	17
Where You Can Find More Information	18
Legal Matters	18
Experts	18

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into the accompanying prospectus. The second part is the accompanying prospectus, which gives more general information about the shares of our common stock and other securities we may offer from time to time under our shelf registration statement, some of which may not apply to the securities offered by this prospectus supplement. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, the information in this prospectus supplement shall control.

Unless the context requires otherwise, in this prospectus supplement and the accompanying prospectus the terms “Rexahn,” “we,” “us” and “our” refer to Rexahn Pharmaceuticals, Inc., a Delaware corporation.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Any statements in this prospectus supplement, the accompanying prospectus and the information incorporated herein and therein by reference relating to future financial or business performance, conditions or strategies and other financial and business matters, including expectations regarding future revenues and operating expenses, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements can generally be identified as such because the context of the statement will include words such as “anticipates,” “believes,” “continue,” “estimates,” “expects,” “intends,” “may,” “opportunity,” “plans,” “potential,” “predicts” or “will,” the negative of these words or words of similar import. Similarly, statements that describe our future plans, strategies, intentions, expectations, objectives, goals or prospects are also forward-looking statements. We caution that these forward-looking statements are subject to numerous assumptions, risks and uncertainties, that can change over time. Factors that may cause actual results to differ materially from the results discussed in the forward-looking statements include:

- our lack of profitability and the need for additional capital to operate our business;
- our ability to obtain the necessary U.S. and worldwide regulatory approvals for our drug candidates;
- successful and timely completion of clinical trials for our drug candidates;
- demand for and market acceptance of our drug candidates;
- the availability of qualified third-party researchers and manufacturers for our drug development programs;
- our ability to develop and obtain protection of our intellectual property; and
- other risks and uncertainties, including those set forth herein under the caption “Risk Factors” and those detailed from time to time in our filings with the Securities and Exchange Commission.

Further information on the factors and risks that could affect our business, financial condition and results of operations, are set forth in this prospectus supplement under “Risk Factors” and in our filings with the SEC, which are available at <http://www.sec.gov>. Any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Except as required by law, we undertake no obligation to publicly revise our forward-looking statements to reflect events or circumstances that arise after the date of this prospectus supplement or the date of documents incorporated by reference in this prospectus supplement or the base prospectus that include forward-looking statements.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors, including but not limited to, the risk factors discussed above, which may cause the actual results, performance or achievements of Rexahn and its subsidiaries to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements and other factors referenced in this Prospectus. We do not undertake and specifically decline any obligation to publicly release the results of any revisions which may be made to any forward-looking statement to reflect events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events.

SUMMARY

This summary is not complete and does not contain all of the information that you should consider before investing in the securities offered by this prospectus. You should read this summary together with the entire prospectus supplement and prospectus, including our financial statements, the notes to those financial statements and the other documents that are incorporated by reference in this prospectus supplement, before making an investment decision. See the Risk Factors section of this prospectus supplement on page S-4 for a discussion of the risks involved in investing in our securities.

Our Business

We are a clinical stage biopharmaceutical company dedicated to the discovery, development, and commercialization of innovative treatments for cancer, central nervous system (“CNS”) disorders, sexual dysfunction and other unmet medical needs. We develop therapies that make it possible to regain normalcy for patients suffering from disease. We have three drug candidates in Phase II clinical trials this year and six or more other drug candidates in pre-clinical development. We intend to leverage our drug-discovery technologies, scientific expertise and developmental know-how to develop and commercialize targeted cancer drugs with greater clinical benefits for patients and new drugs for the treatment of diseases of the central nervous system and sexual dysfunction. We will continue to identify internally developed compounds as potential drug candidates, as well as assess compounds developed by others and, if necessary, license the rights to these compounds in order to develop and commercialize them as drugs.

Our principal corporate offices are located at 9620 Medical Center Drive, Rockville, Maryland 20850 in Maryland’s I-270 technology corridor. Our telephone number is (240) 268-5300.

We currently have three clinical stage drug candidates: Archexin™, Serdaxin™, and Zoraxel™. Our lead anticancer drug candidate, Archexin™, is in Phase II clinical trials for renal cell carcinoma (“RCC”) and pancreatic cancer, and is a first-in-class inhibitor of the protein kinase Akt. Akt plays critical roles in cancer cell proliferation, survival, angiogenesis, metastasis and drug resistance. Archexin™ received “orphan drug” designation from the U.S. Food and Drug Administration (the “FDA”) for five cancer indications (RCC, glioblastoma, ovarian cancer, stomach cancer and pancreatic cancer). The FDA orphan drug program enables expedited FDA review or approval process, seven years of marketing exclusivity after approval and tax incentives for clinical research.

We are currently developing Serdaxin™ for treatment of depression and neurodegenerative disorders. The Phase II clinical trials for Serdaxin™ are ongoing in 2009 for major depressive disorder (MDD). Serdaxin™ increases availability of the neurotransmitters serotonin and dopamine, with mechanisms different from the current market leaders of reuptake inhibitors such as selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs). We believe that Serdaxin™ possesses excellent neuroprotective ability as demonstrated against neurotoxin-induced neurodegeneration models and in a Parkinson’s model. Because over 60% of Parkinson’s, Alzheimer’s and multiple sclerosis patients are suffering from depression as a co-morbidity, Serdaxin™’s effectiveness in both depression and neuroprotection may make it a potential market leader for treatment of the neurological diseases.

We are also developing Zoraxel™ for treatment of sexual dysfunction. Zoraxel™ is being developed as an orally administered, on-demand tablet to treat sexual dysfunction, and has extensive and well-established safety in humans. Zoraxel has a centrally acting mechanism designed to regulate CNS-based phases of sexual function, whereas Phosphodiesterase (PDE)-5 inhibitors (e.g. Viagra) work in peripheral blood vessels only. In a Phase IIa clinical study, male erectile dysfunction patients treated with Zoraxel demonstrated improved erectile function as measured by changes over International Index of Erectile Function (IIEF) baseline score within the 8-week treatment period. It is the dual enhancer of serotonin and dopamine, key neurotransmitters affecting all phases of male sexual function such as sexual arousal, erection and ejaculation.

Further, we leverage our proprietary nanomedicine research and platforms of TIMES (The Inhibitors of Multi-Expression Signals) and 3D-GOLD (3-D Gateway of Ligand Discovery) technology, to strengthen and expand our innovative pipelines, which we believe offer greater therapeutic benefits and quality of life for patients.

The Offering

Common stock offered by us	2,857,143 shares.
Common stock to be outstanding after this offering	60,716,133 (as more fully described in the notes following this table).
Warrants	<p>Warrants to purchase a total of 5,644,443 shares of common stock will be offered in this offering, including the following:</p> <ul style="list-style-type: none"> · Series I Warrants to purchase up to 2,222,222 shares of our common stock at \$1.05 per share, which may be exercised at any time and from time to time on or after the date of delivery of the Series I Warrants through and including the 90th day after the closing date of this offering; · Series II warrants to purchase up to 1,866,666 shares of our common stock at \$1.25 per share, which may be exercised at any time and from time to time on or after the six-month anniversary of the closing date of this offering and through and including the third anniversary of the closing date; and · Series III warrants to purchase up to 1,555,555 shares of our common stock at \$1.50 per share, which may be exercised at any time and from time to time on or after the six-month anniversary of the closing date of this offering and through and including the fifth anniversary of the closing date. <p>This prospectus supplement also relates to the offering of the 5,644,443 shares of our common stock issuable upon exercise of the Warrants.</p>
Use of proceeds	We intend to use the net proceeds received from the sale of the securities for further development of our lead clinical program and other general corporate purposes. See “Use of Proceeds” on page S-13.
Market for the common stock and warrants	Our common stock is quoted and traded on the NYSE Amex exchange under the symbol “RNN.” However, there is no established public trading market for the units or offered warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing the warrants on any securities exchange. The warrants are not attached to the common shares being offered as part of the units.
Risk factors	See “Risk Factors” for a discussion of factors you should consider carefully before deciding to invest in our common stock and warrants to purchase our common stock.
NYSE Amex symbol for common stock	RNN

The 60,716,133 shares of our common stock to be outstanding after this offering includes the 2,857,143 shares to be issued in this offering and an additional 1,833,341 shares of our common stock that we will be obligated to issue to certain of our existing stockholders pursuant to their previously existing contractual rights that will be triggered by the sale of the common stock pursuant to this offering, but excludes:

- 7,760,795 shares of our common stock subject to outstanding options as of May 19, 2009, having a weighted average exercise price of \$1.01 per share;
- 8,912,500 shares of our common stock reserved for future issuance pursuant to our existing stock option plan;
- warrants outstanding as of May 19, 2009, which upon the sale of any common stock pursuant to this offering will be exercisable for 2,069,397 shares at an exercise price of \$1.05 per share;
- 5,644,443 shares of our common stock issuable upon the exercise of Warrants to be issued in this offering, at an average exercise price of \$1.24 per share; and
- 142,857 shares of our common stock issuable upon the exercise of warrants to be issued to the placement agent, at an exercise price of \$1.3125 per share

RISK FACTORS

Investing in our common stock is risky. In addition to the other information in this prospectus, you should consider carefully the following risk factors in evaluating us and our business. If any of the events described in the following risk factors were to occur, our business, financial condition or results of operations likely would suffer. In that event, the trading price of our common stock could decline, and you could lose all or a part of your investment. See also the information contained under the heading "Special Note Regarding Forward-Looking Statements" immediately below.

Risks Related to Our Business

We currently have no product revenues, have incurred negative cash flows from operations since inception, and will need to raise additional capital to operate our business.

To date, we have generated no product revenues and have incurred negative cash flow from operations. Until we receive approval from the FDA and other regulatory authorities for our drug candidates, we cannot sell our drugs and will not have product revenues. Therefore, for the foreseeable future, we will have to fund all of our operations and capital expenditures from the net proceeds of equity or debt offerings we may make, cash on hand, licensing fees and grants. Through the end of 2009, we expect to spend approximately \$1.2 million on clinical development for Phase II clinical trials of Archexin™, Serdaxin™ and Zoraxel™, and the development of preclinical compounds, \$2.4 million on general corporate expenses and approximately \$113,000 on facilities rent. We will need to raise additional money through debt and/or equity offerings in order to continue to develop our drug candidates. If we are not able to raise sufficient additional money, we will have to reduce our research and development activities. We will first reduce research and development activities associated with our preclinical compounds. To the extent necessary, we will then reduce our research and development activities related to some or all of our clinical drugs.

Additionally, changes may occur that would consume our existing capital at a faster rate than projected, including but not limited to, the progress of our research and development efforts, the cost and timing of regulatory approvals and the costs of protecting our intellectual property rights. We may seek additional financing to implement and fund other drug candidate development, clinical trial and research and development efforts, including Phase I clinical trials for other new drug candidates, as well as other research and development projects, which together with the current operating plan for the next year, could aggregate up to \$3.6 million through the end of 2009.

We will need additional financing to continue to develop our drug candidates, which may not be available on favorable terms, if at all. If we are unable to secure additional financing in the future on acceptable terms, or at all, we may be unable to complete our planned pre-clinical and clinical trials or obtain approval of our drug candidates from the FDA and other regulatory authorities. In addition, we may be forced to reduce or discontinue product development or product licensing, reduce or forego sales and marketing efforts and forego attractive business opportunities in order to improve our liquidity to enable us to continue operations. Any additional sources of financing will likely involve the sale of our equity securities or securities convertible into our equity securities, which may have a dilutive effect on our stockholders.

We are not currently profitable and may never become profitable.

We have generated no revenues to date from product sales. Our accumulated deficit as of December 31, 2008 and 2007 was \$29,906,479 and \$24,994,331, respectively. For the years ended December 31, 2008 and 2007, we had net losses of \$4,912,148 and \$4,304,005 respectively, primarily as a result of expenses incurred through a combination of research and development activities related to the various technologies under our control and expenses supporting those activities. Even if we succeed in developing and commercializing one or more of our drug candidates, we expect to incur substantial losses for the foreseeable future and may never become profitable. We also expect to continue to incur significant operating and capital expenditures and anticipate that our expenses will increase substantially in the foreseeable future, based on the following considerations:

- continued pre-clinical development and clinical trials for our current and new drug candidates;
- efforts to seek regulatory approvals for our drug candidates;
- implementing additional internal systems and infrastructure;
- licensing in additional technologies to develop; and

- hiring additional personnel.

We also expect to continue to experience negative cash flow for the foreseeable future as we fund our operating losses and capital expenditures. Until we have the capacity to generate revenues, we are relying upon outside funding resources to fund our cash flow requirements.

We have a limited operating history.

We are a development-stage company with a limited number of drug candidates. To date, we have not demonstrated an ability to perform the functions necessary for the successful commercialization of any of our drug candidates. The successful commercialization of our drug candidates will require us to perform a variety of functions, including, but not limited to:

- conducting pre-clinical and clinical trials;
- participating in regulatory approval processes;
- formulating and manufacturing products; and
- conducting sales and marketing activities.

To date, our operations have been limited to organizing and staffing our company, acquiring, developing and securing our proprietary technology, drug candidate research and development and undertaking, through third parties, pre-clinical trials and clinical trials of our principal drug candidates. These operations provide a limited basis for assessment of our ability to commercialize drug candidates.

We may not obtain the necessary U.S. or worldwide regulatory approvals to commercialize our drug candidates.

We will need FDA approval to commercialize our drug candidates in the U.S. and approvals from the FDA-equivalent regulatory authorities in foreign jurisdictions to commercialize our drug candidates in those jurisdictions. In order to obtain FDA approval of our drug candidates, we must submit to the FDA a New Drug Application (“NDA”) demonstrating that the drug candidate is safe for humans and effective for its intended use. This demonstration requires significant research and animal tests, which are referred to as pre-clinical studies, as well as human tests, which are referred to as clinical trials. Satisfaction of the FDA’s regulatory requirements typically takes many years, and depends upon the type, complexity and novelty of the drug candidate and requires substantial resources for research, development and testing. We cannot predict whether our research and clinical approaches will result in drugs that the FDA considers safe for humans and effective for indicated uses. Two of our drug candidates, Archexin™ and RX-0047, are ASO compounds. To date, the FDA has not approved any NDAs for any ASO compounds. In addition, each of Archexin™, RX-0201-nano and RX-0047-nano is of a drug class (Akt inhibitor, in the case of Archexin™ and RX-0201-nano, and HIF inhibitor, in the case of RX-0047) that has not been approved by the FDA to date, nor have we submitted such NDA. After the clinical trials are completed, the FDA has substantial discretion in the drug approval process and may require us to conduct additional pre-clinical and clinical testing or to perform post-marketing studies.

In foreign jurisdictions, we must receive approval from the appropriate regulatory authorities before we can commercialize our drugs. Foreign regulatory approval processes generally include all of the risks associated with the FDA approval procedures described above. We cannot assure you that we will receive the approvals necessary to commercialize our drug candidates for sale outside the United States.

Our drug candidates are in early stages of clinical trials.

Our drug candidates are in an early stage of development and require extensive clinical testing, which are very expensive, time-consuming and difficult to design. In 2007, Archexin™, an oncology drug candidate, entered Phase II clinical trials. In 2008, we initiated Phase II clinical trial of Zoraxel™, a sexual dysfunction drug candidate, and received FDA approval to initiate Phase II clinical trial of Serdaxin™, a drug candidate for depression and other CNS disorders.

Clinical trials are very expensive, time-consuming and difficult to design and implement.

Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The clinical trial process is also time-consuming. We estimate that clinical trials of our current drug candidates will take up to three years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. The commencement and completion of clinical trials may be delayed by several factors, including, but not limited to:

- unforeseen safety issues;
- determination of dosing issues;
- lack of effectiveness during clinical trials;
- reliance on third party suppliers for the supply of drug candidate samples;
- slower than expected rates of patient recruitment;
- inability to monitor patients adequately during or after treatment;
- inability or unwillingness of medical investigators and institutional review boards to follow our clinical protocols; and
- lack of sufficient funding to finance the clinical trials.

In addition, we or the FDA may suspend clinical trials at any time if it appears that we are exposing participants to unacceptable health risks or if the FDA finds deficiencies in our IND submissions or the conduct of these trials.

If the results of our clinical trials fail to support our drug candidate claims, the completion of development of such drug candidate may be significantly delayed or we may be forced to abandon development altogether, which will significantly impair our ability to generate product revenues.

Even if our clinical trials are completed as planned, we cannot be certain that our results will support our drug candidate claims. Success in pre-clinical testing and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the results of later clinical trials will replicate the results of prior clinical trials and pre-clinical testing. The clinical trial process may fail to demonstrate that our drug candidates are safe for humans and effective for indicated uses. This failure would cause us to abandon a drug candidate and may delay development of other drug candidates. Any delay in, or termination of, our clinical trials will delay the filing of our NDAs with the FDA and, ultimately, delay our ability to commercialize our drug candidates and generate product revenues. In addition, our trial designs may involve a small patient population. Because of the small sample size, the results of early clinical trials may not be indicative of future results.

If physicians and patients do not accept and use our drugs, our ability to generate revenue from sales of our products will be materially impaired.

Even if the FDA approves our drug candidates, physicians and patients may not accept and use them. Future acceptance and use of our products will depend upon a number of factors including:

- awareness of the drug's availability and benefits;
- perceptions by members of the health care community, including physicians, about the safety and effectiveness of our drugs;
- pharmacological benefit and cost-effectiveness of our product relative to competing products;
- availability of reimbursement for our products from government or other healthcare payers;
- effectiveness of marketing and distribution efforts by us and our licensees and distributors, if any; and
- the price at which we sell our products.

Because we expect sales of our current drug candidates, if approved, to generate substantially all of our product revenues for the foreseeable future, the failure of any of these drugs to find market acceptance would harm our business and could require us to seek additional financing.

Much of our drug development program depends upon third-party researchers, and the results of our clinical trials and such research activities are, to a limited extent, beyond our control.

We depend upon independent investigators and collaborators, such as universities and medical institutions, to conduct our pre-clinical and clinical trials and toxicology studies. This business practice is typical for the pharmaceutical industry and companies like us. For example, the Phase I clinical trials of Archexin™ were conducted at the Lombardi Comprehensive Cancer Center of Georgetown Medical Center and the University of Alabama at Birmingham, with the assistance of Amarex, LLC, a pharmaceutical clinical research service provider who is responsible for creating the reports that will be submitted to the FDA. We also relied on TherImmune Research Corporation (now named Bridge Global Pharmaceutical Services, Inc.), a discovery and pre-clinical service provider, to summarize Archexin™'s pre-clinical data. While we make every effort internally to oversee their work, these collaborators are not our employees and we cannot control the amount or timing of resources that they devote to our programs. These investigators may not assign priority to our programs or pursue them as diligently as we would if we were undertaking such programs ourselves. For example, we have a billing dispute on the work performance and expenses with Amarex, LLC for clinical trials. The dispute might cause a delay of the program or increase our costs associated with the program. If outside collaborators fail to devote sufficient time and resources to our drug-development programs, or if their performance is substandard, the approval of our FDA applications, if any, and our introduction of new drugs, if any, may be delayed. The risk of completion or delay of these studies is not within our direct control and a program delay may occur due to circumstances outside our control. A delay in any of these programs may not necessarily have a direct impact on our daily operations. However, to the extent that a delay results in additional cost to us, a higher than expected expense may result. These collaborators may also have relationships with other commercial entities, some of which may compete with us. If our collaborators assist our competitors at our expense, our competitive position would be harmed.

We rely exclusively on third parties to formulate and manufacture our drug candidates, which expose us to a number of risks that may delay development, regulatory approval and commercialization of our products or result in higher product costs.

We have no experience in drug formulation or manufacturing. Internally, we lack the resources and expertise to formulate or manufacture our own drug candidates. Therefore, we rely on third party expertise to support us in this area. For example, we have entered into contracts with third-party manufacturers such as Raylo Chemicals Inc., Formatech, Inc., Avecia Biotechnology Inc. and UPM Pharmaceuticals, Inc. to manufacture, supply, store and distribute supplies of our drug candidates for our clinical trials. If any of our drug candidates receive FDA approval, we will rely on these or other third-party contractors to manufacture our drugs. Our reliance on third-party manufacturers exposes us to the following potential risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and the FDA must approve any replacement contractor. This approval would require new testing and compliance inspections. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, the production of our products after receipt of FDA approval, if any.
- Our third-party manufacturers might be unable to formulate and manufacture our drugs in the volume and of the quality required to meet our clinical needs and commercial needs.
- Our contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.
- Drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Agency (“DEA”), and corresponding state agencies to ensure strict compliance with good manufacturing practice and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers’ compliance with these regulations and standards, but we may be ultimately responsible for any of their failures.
- If any third-party manufacturer makes improvements in the manufacturing process for our products, we may not own, or may have to share, the intellectual property rights to the innovation.

Each of these risks could delay our clinical trials, drug approval and commercialization and potentially result in higher costs and/or reduced revenues.

We have no experience selling, marketing or distributing products and currently no internal capability to do so.

We currently have no sales, marketing or distribution capabilities. While we intend to have a role in the commercialization of our products, we do not anticipate having the resources in the foreseeable future to globally develop sales and marketing capabilities for all of our proposed products. Our future success depends, in part, on our ability to enter into and maintain collaborative relationships with other companies having sales, marketing and distribution capabilities, the collaborator’s strategic interest in the products under development and such collaborator’s ability to successfully market and sell any such products. To the extent that we decide not to, or are unable to, enter into collaborative arrangements with respect to the sales and marketing of our proposed products, significant capital expenditures, management resources and time will be required to establish and develop an in-house marketing and sales force with technical expertise. We cannot assure you that we will be able to establish or maintain relationships with third party collaborators or develop in-house sales and distribution capabilities. To the extent that we depend on third parties for marketing and distribution, any revenues we receive will depend upon the efforts of such third parties, as well as the terms of its agreements with such third parties, which cannot be predicted at this early stage of our development. We cannot assure you that such efforts will be successful. In addition, we cannot assure you that we will be able to market and sell our products in the United States or overseas.

Developments by competitors may render our products or technologies obsolete or non-competitive.

We will compete against fully integrated pharmaceutical companies and smaller companies that are collaborating with larger pharmaceutical companies, such as Keryx Biopharmaceuticals, Genta Incorporated and Imclone Systems Incorporated, as well as academic institutions, government agencies and other public and private research organizations. In addition, many of these competitors, either alone or together with their collaborative partners, operate larger research and development programs or have substantially greater financial resources than we do, as well as more experience in:

- developing drugs;
- undertaking pre-clinical testing and human clinical trials;
- obtaining FDA and other regulatory approvals of drugs;
- formulating and manufacturing drugs; and
- launching, marketing and selling drugs.

Large pharmaceutical companies such as Bristol-Myers Squibb, Eli-Lilly, Novartis and Glaxo-SmithKline currently sell both generic and proprietary compounds for the treatment of cancer. In addition, companies pursuing different but related fields represent substantial competition. Many of these organizations have substantially greater capital resources, larger research and development staff and facilities, longer drug development history in obtaining regulatory approvals and greater manufacturing and marketing capabilities than we do. These organizations also compete with us to attract qualified personnel, parties for acquisitions, joint ventures or other collaborations.

If we fail to adequately protect or enforce our intellectual property rights or secure rights to patents of others, the value of our intellectual property rights would diminish and our business and competitive position would suffer.

Our success, competitive position and future revenues will depend in part on our ability and the abilities of our licensors to obtain and maintain patent protection for our products, methods, processes and other technologies, to preserve our trade secrets, to prevent third parties from infringing on our proprietary rights and to operate without infringing the proprietary rights of third parties. We have filed U.S. and PCT patent applications for anti-Akt compounds, including Archexin™ and anti-HIF compounds, including RX-0047. In November 2006, we were granted a U.S. patent for our anti-Akt compounds, including Archexin™. The patent covers the nucleotide sequences of the antisense compounds that target and inhibit the expression of Akt in human tissues or cells. The patent also covers the method of using the compounds to induce cytotoxicity in cancer cells. We have also filed three U.S. provisional patent applications for new anticancer quinazoline compounds, new anticancer nucleoside products and a drug target, cenexin, a polo-box binding protein. In December 2004, we also filed two Korean patent applications for new anticancer piperazine compounds. Through our licensing agreement with Revaax, we hold exclusive rights to five patents and multiple patent applications, with respect to certain chemical structures related to antibiotics, but without antibiotic efficacy. However, we cannot predict:

- the degree and range of protection any patents will afford us against competitors, including whether third parties will find ways to invalidate or otherwise circumvent our licensed patents;
- if and when patents will issue;
- whether or not others will obtain patents claiming aspects similar to those covered by our licensed patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose.

Our success also depends upon the skills, knowledge and experience of our scientific and technical personnel, our consultants and advisors as well as our licensors and contractors. To help protect our proprietary know-how and our inventions for which patents may be unobtainable or difficult to obtain, we rely on trade secret protection and confidentiality agreements. To this end, we require all employees to enter into agreements that prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business. These agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure or the lawful development by others of such information. If any of our trade secrets, know-how or other proprietary information is disclosed, the value of our trade secrets, know-how and other proprietary rights would be significantly impaired and our business and competitive position would suffer.

If we infringe the rights of third parties we could be prevented from selling products and be forced to pay damages and defend against litigation.

If our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and may have to:

- obtain licenses, which may not be available on commercially reasonable terms, if at all;
- redesign our products or processes to avoid infringement;
- stop using the subject matter claimed in the patents held by others, which could cause us to lose the use of one or more of our drug candidates;
- pay damages; or
- defend litigation or administrative proceedings which may be costly whether we win or lose, and which could result in a substantial diversion of our management resources.

Although to date, we have not received any claims of infringement by any third parties, as our drug candidates move into clinical trials and commercialization, our public profile and that of our drug candidates may be raised and generate such claims.

Our license agreement with Revaax may be terminated in the event we commit a material breach, the result of which would significantly harm our business prospects.

Our license agreement with Revaax is subject to termination by Revaax if we materially breach our obligations under the agreement, including breaches with respect to certain installment payments and royalty payments, if such breaches are not cured within a 60-day period. The agreement also provides that it may be terminated if we become involved in a bankruptcy, insolvency or similar proceeding. If this license agreement is terminated, we will lose all of our rights to develop and commercialize the licensed compounds, including Serdaxin™ and Zoraxel™, which would significantly harm our business and future prospects.

If we are unable successfully to manage our growth, our business may be harmed.

In addition to our own internally developed drug candidates, we proactively seek opportunities to license-in the compounds in oncology and other therapeutic areas that are strategic and have value creating potential to take advantage of our development know-how. We are actively pursuing additional drug candidates to acquire for development. Such additional drug candidates could significantly increase our capital requirements and place further strain on the time of our existing personnel, which may delay or otherwise adversely affect the development of our existing drug candidates. Alternatively, we may be required to hire more employees, further increasing the size of our organization and related expenses. If we are unable to manage our growth effectively, we may not efficiently use our resources, which may delay the development of our drug candidates and negatively impact our business, results of operations and financial condition.

We may not be able to attract and retain qualified personnel necessary for the development and commercialization of our drug candidates. Our success may be negatively impacted if key personnel leave.

Attracting and retaining qualified personnel will be critical to our future success. We compete for qualified individuals with numerous biopharmaceutical companies, universities and other research institutions. Competition for such individuals is intense, and we cannot assure you that we will be successful.

The loss of the technical knowledge and management and industry expertise of any of our key personnel, especially Dr. Chang H. Ahn, our Chairman and Chief Executive Officer and regulatory expert, could result in delays in product development and diversion of management resources, which could adversely affect our operating results. We do not have “key person” life insurance policies for any of our officers.

We may incur substantial liabilities and may be required to limit commercialization of our products in response to product liability lawsuits.

The testing and marketing of medical products entail an inherent risk of product liability. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our products. Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of pharmaceutical products we develop, alone or with collaborators. Although we currently carry clinical trial insurance and product liability insurance we, or any collaborators, may not be able to maintain such insurance at a reasonable cost. Even if our agreements with any future collaborators entitles us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Our business could be adversely impacted if we have deficiencies in our disclosure controls and procedures or internal control over financial reporting.

Effective internal control over financial reporting and disclosure controls and procedures are necessary in order for us to provide reliable financial and other reports and effectively prevent fraud. These types of controls are designed to provide reasonable assurance regarding the reliability of financial reporting and the proper preparation of our financial statements, as well as regarding the timely reporting of material information. If we cannot maintain effective internal control or disclosure controls and procedures, or provide reliable financial or SEC reports or prevent fraud, investors may lose confidence in our reported financial information, our common stock could be subject to delisting on the stock exchange where it is traded, our operating results and the trading price of our common stock could suffer, and we might become subject to litigation.

While our management will continue to review the effectiveness of our internal control over financial reporting and disclosure controls and procedures, there is no assurance that our disclosure controls and procedures or our internal control over financial reporting will be effective in accomplishing all control objectives, including the prevention and detection of fraud, all of the time.

Risks Related to Our Stock

An investment in shares of our common stock is very speculative and involves a very high degree of risk.

To date, we have generated no revenues from product sales and only minimal revenues from a research agreement with a minority shareholder, and interest on bank account balances and short-term investments. Our accumulated deficit as of December 31, 2008 and 2007 was \$29,906,479 and \$24,994,331, respectively. For the years ended December 31, 2008 and 2007, we had net losses of \$4,912,148 and \$4,304,005, respectively, primarily as a result of expenses incurred through a combination of research and development activities related to the various technologies under our control and expenses supporting those activities. Until we receive approval from the FDA and other regulatory authorities for our drug candidates, we cannot sell our drugs and will not have product revenues.

The market price of our common stock may fluctuate significantly.

The market price of our common stock may fluctuate significantly in response to factors, some of which are beyond our control, such as:

- the announcement of new products or product enhancements by us or our competitors;
- developments concerning intellectual property rights and regulatory approvals;
- variations in our and our competitors' results of operations;
- changes in earnings estimates or recommendations by securities analysts; and
- developments in the biotechnology industry.

Further, the stock market, in general, and the market for biotechnology companies, in particular, have experienced extreme price and volume fluctuations. Continued market fluctuations could result in extreme volatility in the price of our common stock, which could cause a decline in the value of our common stock. You should also be aware that price volatility might be worse if the trading volume of our common stock is low. We have not paid, and do not expect to pay, any cash dividends because we anticipate that any earnings generated from future operations will be used to finance our operations and as a result, you will not realize any income from an investment in our common stock until and unless you sell your shares at a profit.

Some or all of the “restricted” shares of our common stock issued in the merger of CPRD and Rexahn, Corp or held by other stockholders may be offered from time to time in the open market pursuant to Rule 144, and these sales may have a depressive effect on the market for our common stock. In general, an affiliated person who has held restricted shares for a period of six months may, upon filing with the SEC a notification on Form 144, sell into the market common stock in an amount equal to 1 percent of the outstanding shares (approximately 600,000 shares) during a three-month period. Non-affiliates may sell restricted securities after six months without any limits on volume.

Our common stock may be delisted from the NYSE Amex.

On February 24, 2009, we received a notice from the NYSE Amex providing notification that we are not in compliance with Section 1003(a)(iii) of the NYSE Amex Company Guide (the "Company Guide") because we have stockholders' equity of less than \$6,000,000 and losses from continuing operations and net losses in our five most recent fiscal years. The notification on February 24, 2009 had no current effect on the listing of our shares on the NYSE Amex. Rather, we were afforded the opportunity to submit a proposed plan to the NYSE Amex by March 24, 2009 (the "Plan"), addressing how we intend to regain compliance of the Company Guide within a maximum of 18 months. We submitted our Plan on March 23, 2009. On May 4, 2009, the NYSE Amex notified us that it has determined we have made a reasonable demonstration of our ability to regain compliance with the continued listing standards and has accepted the Plan. The NYSE Amex has decided to grant us an extension until August 24, 2010 within which to regain compliance with the continued listing standards. We will be subject to periodic review by the NYSE Amex staff during the extension period covered by the Plan. Failure to make progress consistent with the Plan within the specified time periods could result in the NYSE Amex staff initiating delisting proceedings.

We believe that the listing of our common stock on a recognized national trading market, such as the NYSE Amex, is an important part of our business and strategy. Such a listing helps our stockholders by providing a readily available trading market with current quotations. Without that, stockholders may have a difficult time getting a quote for the sale or purchase of our stock, the sale or purchase of our stock would likely be made more difficult and the trading volume and liquidity of our stock would likely decline. The absence of such a listing may adversely affect the acceptance of our common stock as currency or the value accorded it by other parties. The delisting of our common stock from the NYSE Amex would result in negative publicity and would negatively impact our ability to raise capital in the future.

If the NYSE Amex delists our securities from trading on its exchange, we could face significant material adverse consequences including:

- a limited ability of market quotations for our securities;
- a determination that our common stock is a "penny stock" which will require brokers trading in our common stock to adhere to more stringent rules and possibly resulting in a reduced level of trading activity in the secondary trading market for our common stock;
- a limited amount of news and analyst coverage for our company; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

Our common stock is currently listed on the NYSE Amex. However, because our common stock may be a “penny stock,” it may be more difficult for you to sell shares of our common stock, and the market price of our common stock may be adversely affected.

Our common stock may be a “penny stock” if, among other things, the stock price is below \$5.00 per share, we are not listed on a national securities exchange or approved for quotation on the Nasdaq Stock Market, or we have not met certain net tangible asset or average revenue requirements. Broker-dealers who sell penny stocks must provide purchasers of these stocks with a standardized risk-disclosure document prepared by the SEC. This document provides information about penny stocks and the nature and level of risks involved in investing in the penny-stock market. A broker must also give a purchaser, orally or in writing, bid and offer quotations and information regarding broker and salesperson compensation, make a written determination that the penny stock is a suitable investment for the purchaser, and obtain the purchaser’s written agreement to the purchase. Broker-dealers must also provide customers that hold penny stock in their accounts with such broker-dealer a monthly statement containing price and market information relating to the penny stock. If a penny stock is sold in violation of the penny stock rules, purchasers may be able to cancel their purchase and get their money back. If applicable, the penny stock rules may make it difficult for investors to sell their shares of our stock. Because of the rules and restrictions applicable to a penny stock, there is less trading in penny stocks and the market price of our common stock may be adversely affected. Also, many brokers choose not to participate in penny stock transactions. Accordingly, purchasers may not always be able to resell shares of our common stock publicly at times and prices that they feel are appropriate.

Risks Related to this Offering

As a new investor, you will incur substantial dilution as a result of this offering and future equity issuances, and as a result, our stock price could decline.

The offering price is substantially higher than the net tangible book value per share of our outstanding common stock. As a result, based on our capitalization as of March 31, 2009, investors purchasing common stock in this offering will incur immediate dilution of \$0.98 per share of common stock purchased, based on the offering price of \$1.05 per share, without giving effect to the potential exercise of warrants offered by this prospectus supplement. In addition to this offering, subject to market conditions and other factors, it is likely that we will pursue additional financings in the future, as we continue to build our business. In future years, we will likely need to raise significant additional capital to finance our operations and to fund clinical trials, regulatory submissions and the development, manufacture and marketing of other products under development and new product opportunities. Accordingly, we may conduct substantial future offerings of equity or debt securities. The exercise of outstanding options and warrants and future equity issuances, including future public offerings or future private placements of equity securities and any additional shares issued in connection with acquisitions, will result in dilution to investors. In addition, the market price of our common stock could fall as a result of resales of any of these shares of common stock due to an increased number of shares available for sale in the market.

There is no public market for the Warrants to purchase common stock to be issued in this offering.

There is no established public trading market for the warrants being sold in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

Our use of the offering proceeds may not yield a favorable return on your investment.

We currently intend to use the net proceeds received from the sale of the securities for further development of our lead clinical program and other general corporate purposes. Our management has broad discretion over how these proceeds are used and could spend the proceeds in ways with which you may not agree. Pending the use of the proceeds in this offering, we will invest them. However, the proceeds may not be invested in a manner that yields a favorable or any return.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of the securities offered by this prospectus supplement and the accompanying prospectus will be approximately \$2,820,000, after deducting the placement agent's fees (excluding costs of Warrants issued to the placement agent) and estimated offering expenses and assuming that we will sell the maximum number of units offered hereby. In addition, if all of the Warrants offered by this prospectus supplement are exercised in full for cash (excluding the warrants issued to the placement agent), we will receive, after deducting placement agent fees, net proceeds of approximately an additional \$6,579,998 consisting of the following:

- \$2,193,333 of net proceeds from the exercise of all of the Series I Warrants;
- \$2,193,333 of net proceeds from the exercise of all of the Series II Warrants; and
- \$2,193,333 of net proceeds from the exercise of all of the Series III Warrants.

There can be no assurance we will sell any or all of the securities offered hereby, or that any Warrants offered hereby that are sold will be exercised. Because there is no minimum offering amount required as a condition to closing this offering, we may sell less than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us.

We intend to use the net proceeds received from the sale of the securities for further development of our lead clinical program and other general corporate purposes. We cannot estimate precisely the allocation of the net proceeds from this offering. The amounts and timing of the expenditures may vary significantly, depending on numerous factors, including the progress of our clinical trials and other development efforts, as well as the amount of cash used in our operations. Accordingly, our management will have broad discretion in the application of the net proceeds of this offering. We reserve the right to change the use of proceeds as a result of certain contingencies such as competitive developments, opportunities to acquire technologies or products and other factors. Pending the uses described above, we plan to invest the net proceeds of this offering in short- and medium-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DILUTION

If you purchase our common stock in this offering (either as a component of units or upon warrant exercise), your interest will be diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock after this offering. We calculate net tangible book value per share by dividing the net tangible book value, tangible assets less total liabilities, by the number of outstanding shares of our common stock.

Our net tangible book value at March 31, 2009, was \$1.62 million, or \$0.03 per share, based on 56,025,649 shares of our common stock outstanding as of that date. After giving effect to the sale of 2,857,143 shares of common stock by us at a public offering price of \$1.05 per share, less the placement agency fees, and taking into account an additional 1,833,341 shares of our common stock that we will be obligated to issue to certain of our existing stockholders pursuant to their previously existing contractual rights that will be triggered by the sale of the common stock pursuant to this offering, our net tangible book value as of March 31, 2009 would have been approximately \$4.44 million, or \$0.07 per share. This represents an immediate increase in the net tangible book value of approximately \$0.04 per share to existing stockholders and an immediate dilution of \$0.98 per share to investors in this offering. The following table illustrates this per share dilution:

Public offering price per share		\$ 1.05
Net tangible book value per share as of March 31, 2009	\$ 0.03	
Increase in net tangible book value per share attributable to this offering	\$ 0.04	
Adjusted net tangible book value per share as of March 31, 2009 after giving effect to this offering		\$ 0.07
Dilution per share to new investors		\$ 0.98

The foregoing per share dilution does not give effect to the potential exercise of the Warrants offered hereby. Assuming the sale of all units offered hereby and also the exercise of all Warrants within such units, the per share dilution would be as follows:

Our net tangible book value at March 31, 2009, was \$1.62 million, or \$0.03 per share, based on 56,025,649 shares of our common stock outstanding as of that date. After giving effect to the sale of 8,501,586 shares of common stock (inclusive of 5,644,443 shares issuable upon exercise of the Warrants) by us at a blended public offering price of \$1.18 per share, less the placement agency fees, and taking into account an additional 1,833,341 shares of our common stock that we will be obligated to issue to certain of our existing stockholders pursuant to their previously existing contractual rights that will be triggered by the sale of the common stock pursuant to this offering, our net tangible book value as of March 31, 2009, would have been approximately \$11.02 million, or \$0.17 per share. This represents an immediate increase in the net tangible book value of approximately \$0.14 per share to existing stockholders and an immediate dilution of \$1.01 per share to investors in this offering. The following table illustrates this per share dilution:

Public offering price per share		\$ 1.18
Net tangible book value per share as of March 31, 2009	\$ 0.03	
Increase in net tangible book value per share attributable to this offering	\$ 0.14	
Adjusted net tangible book value per share as of March 31, 2009 after giving effect to this offering		\$ 0.17
Dilution per share to new investors		\$ 1.01

In addition, the calculations in the foregoing tables do not take into account any of the following:

- 7,760,795 shares of our common stock subject to outstanding options as of May 19, 2009, having a weighted average exercise price of \$1.01 per share;
- 8,912,500 shares of our common stock reserved for future issuance pursuant to our existing stock option plan;
- warrants outstanding as of May 19, 2009, which upon the sale of any common stock pursuant to this offering will be exercisable for 2,069,397 shares at an exercise price of \$1.05 per share; and
- 142,857 shares of our common stock issuable upon the exercise of warrants to be issued to the placement agent, at an exercise price of \$1.3125 per share.

To the extent that any of our outstanding options or warrants are exercised, we grant additional options under our stock option plans or issue additional warrants, or we issue additional shares of common stock in the future, there may be further dilution to new investors.

PLAN OF DISTRIBUTION

Pursuant to a placement agency agreement dated April 6, 2009, we have engaged Rodman & Renshaw, LLC to act as our exclusive placement agent in connection with an offering of our shares of common stock and warrants pursuant to this prospectus supplement and accompanying prospectus. Under the terms of the placement agency agreement, the placement agent has agreed to be our exclusive placement agent, on a best efforts basis, in connection with the issuance and sale by us of our shares of common stock and warrants in a proposed takedown from our shelf registration statement. The terms of any such offering will be subject to market conditions and negotiations between us, the placement agent and prospective purchasers. The placement agency agreement provides that the obligations of the placement agent is subject to certain conditions precedent, including the absence of any material adverse change in our business and the receipt of certain certificates, opinions and letters from us and our counsel. The placement agency agreement does not give rise to any commitment by the placement agent to purchase any of our shares of common stock and warrants, and the placement agent will have no authority to bind us by virtue of the placement agency agreement. Further, the placement agent does not guarantee that it will be able to raise new capital in any prospective offering.

We will enter into securities purchase agreements directly with investors in connection with this offering, and we will only sell to investors who have entered into securities purchase agreements.

We will deliver the shares of common stock being issued to the purchasers electronically upon receipt of purchaser funds for the purchase of the shares of our common stock and warrants offered pursuant to this prospectus supplement. The warrants will be issued in registered physical form. We expect to deliver the shares of our common stock and warrants being offered pursuant to this prospectus supplement on or about May 22, 2009.

We have agreed to pay the placement agent a total fee equal to 6% of the gross proceeds of this offering and from the exercise of the Series I Warrants, the Series II Warrants and the Series III Warrants. In addition, we agreed to issue compensation warrants to the placement agent to purchase 142,857 shares of our common stock. The compensation warrants will be substantially on the same terms as the warrants offered hereby, except that the compensation warrants will have an exercise price equal to U.S.\$1.3125 (125% of the per unit purchase price to investors), will expire on May 19, 2014 (five years from the date of this prospectus supplement) and will otherwise comply with Rule 5110 of the Financial Institutions Regulatory Authority ("FINRA") in that for a period of six months after the issuance date of the compensation warrants (which shall not be earlier than the closing date of the offering pursuant to which the compensation warrants are being issued), neither the compensation warrants nor any warrant shares issued upon exercise of the compensation warrants shall be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of the offering pursuant to which the compensation warrants are being issued, except the transfer of any security:

- by operation of law or by reason of reorganization of the Company;
- to any NASD member firm participating in this offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction described above for the remainder of the time period;
- if the aggregate amount of securities of the Company held by the placement agent or related person do not exceed 1% of the securities being offered;
- that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or
- the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction set forth above for the remainder of the time period.

In compliance with the guidelines of FINRA, the maximum consideration or discount to be received by the placement agent or any other FINRA member may not exceed 8% of the gross proceeds to us in this offering or any other offering in the United States pursuant to the Prospectus.

We have agreed to indemnify the placement agent and specified other persons against some civil liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act") and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and to contribute to payments that the placement agent may be required to make in respect of such liabilities.

The placement agency agreement with Rodman & Renshaw, LLC will be included as an exhibit to a Current Report on Form 8-K that we will file with the SEC and that will be incorporated by reference into the registration statement of which this prospectus supplement forms a part.

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it and any profit realized on the resale of the units sold by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of common stock and warrants by the placement agent acting as principal. Under these rules and regulations, the placement agent:

- may not engage in any stabilization activity in connection with our securities; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

DESCRIPTION OF WARRANTS

The material terms and provisions of the warrants being offered pursuant to this prospectus supplement are summarized below. The form of warrant will be provided to each purchaser in this offering and will be filed as an exhibit to a Current Report on Form 8-K with the SEC in connection with this offering.

General Terms of the Warrants

The Series I Warrants to be issued in this offering represent the rights to purchase up to 2,222,222 shares of common stock at an initial exercise price of \$1.05 per share. Each Series I Warrant may be exercised at any time and from time to time on or after the date of delivery of the Series I Warrants through and including the 90th day after the closing date of this offering.

The Series II Warrants to be issued in this offering represent the rights to purchase up to 1,866,666 shares of common stock at an initial exercise price of \$1.25 per share. Each Series II Warrant may be exercised at any time and from time to time on or after six months after the closing date of this offering and through and including the third anniversary of the closing date.

The Series III Warrants to be issued in this offering represent the rights to purchase up to 1,555,555 shares of Common Stock at an initial exercise price of \$1.50 per share. Each Series III Warrant may be exercised at any time and from time to time on or after six months after the closing date of this offering and through and including the fifth anniversary of the closing date.

Exercise

Holders of the Warrants may exercise their Warrants to purchase shares of our common stock on or before the termination date by delivering (i) notice of exercise, appropriately completed and duly signed, and (ii) if such holder is not utilizing the cashless exercise provisions with respect to the Warrants, payment of the exercise price for the number of shares with respect to which the Warrant is being exercised. Warrants may be exercised in whole or in part, but only for full shares of common stock. Any portion of a Series II Warrant or Series III Warrant that is not exercised prior to its expiration date shall automatically be exercised on such expiration date by means of cashless exercise. We provide certain rescission and buy-in rights to a holder if we fail to deliver the shares of common stock underlying the Warrants by the third trading day after the date on which delivery of the stock certificate is required by the Warrant. With respect to the rescission rights, the holder has the right to rescind the exercise if stock certificates are not timely delivered. The buy-in rights apply if after the third trading day on which delivery of the stock certificate is required by the Warrant, the holder purchases (in an open market transaction or otherwise) shares of our common stock to deliver in satisfaction of a sale by the holder of the Warrant shares that the holder anticipated receiving from us upon exercise of the Warrant. In this event, we will:

- pay in cash to the holder the amount, if any, by which (x) the holder's total purchase price (including brokerage commissions, if any) for the shares of common stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of warrant shares that we are required to deliver to the holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to holder's such purchase obligation was executed; and
- at the election of holder, either (A) reinstate the portion of the Warrant and equivalent number of warrant shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the holder the number of shares of common stock that would have been issued had we timely complied with its exercise and delivery obligations hereunder.

In addition, the Warrant holders are entitled to a "cashless exercise" option if, at any time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance or resale of the shares of common stock underlying the Warrants. This option entitles the Warrant holders to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares with respect to which the Warrant is being exercised, the volume weighted average of the prices per share of our common stock on the trading date immediately prior to the date of exercise and the applicable cashless exercise price of the Warrants.

The shares of common stock issuable on exercise of the Warrants will be, when issued and paid for in accordance with the Warrants, duly and validly authorized, issued and fully paid and non-assessable. We will reserve from our authorized and unissued common stock a sufficient number of shares to provide for the issuance of the warrant shares upon the exercise of any purchase rights under this Warrant.

Fundamental Transactions

If, at any time while the Warrants are outstanding, we (1) directly or indirectly, in one or more related transactions, consolidate or merge with or into another person, (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or (3) are subject to or complete any direct or indirect, purchase offer, tender offer or exchange offer pursuant to which holders of our common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding common stock, (4) directly or indirectly, in one or more related transactions, effect any reclassification, reorganization or recapitalization of our common stock or any compulsory share exchange pursuant to which our common stock is effectively converted into or exchanged for other securities, cash or property, or (5) directly or indirectly engage in one or more related transactions that consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another person whereby such other person acquires more than 50% of the outstanding shares of common stock (not including any shares of common stock held by the other person or other persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination), then the holder shall have the right thereafter to receive, upon exercise of the Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant shares then issuable upon exercise of the Warrant, and any additional consideration payable as part of the Fundamental Transaction. Any successor to us or surviving entity shall assume the obligations under the Warrant.

In the event of certain Fundamental Transactions, the holders of the Warrants will be entitled to receive, in lieu of our common stock and at the holders' option, cash in an amount equal to the value of the remaining unexercised portion of the Warrant on the date of the transaction determined using Black-Scholes option pricing model obtained from the "OV" function on Bloomberg, L.P. with an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT by Bloomberg L.P. as of the trading day immediately prior to the public announcement of the transaction.

Subsequent Rights Offerings

If, at any time while the Warrants are outstanding, we issue rights, options or warrants to all holders of our common stock entitling them to purchase our common stock at a price per share less than the volume weighted average price on the date of the issuance of such rights, options or warrants, then the exercise price will adjust pursuant to a volume weighted average price based ratio.

Pro Rata Distributions

If, at any time while the Warrants are outstanding, we distribute evidences of our indebtedness, assets, or rights or warrants to purchase any security other than our common stock to all holders of our common stock, then the exercise price will adjust pursuant to a volume weighted average price based ratio.

Certain Adjustments

The exercise price and the number of shares of common stock purchasable upon the exercise of the Warrants are subject to adjustment upon the occurrence of specific events, including stock dividends, stock splits, combinations and reclassifications of our common stock. In addition, if we enter into any variable rate transactions (other than either one as part of an acquisition or strategic transaction), the exercise price shall be reduced to the lowest possible conversion or exercise price at which such securities in the variable rate transaction may be converted or exercised.

Delivery of Certificates

Upon the holder's exercise of a Warrant, we will promptly, but in no event later than three trading days after the exercise date (the "Warrant Share Delivery Date"), issue and deliver, or cause to be issued and delivered, a certificate for the shares of common stock issuable upon exercise of the Warrant. In addition, we will, if the holder provides the necessary information to us, issue and deliver the shares electronically through The Depository Trust Corporation through its Deposit Withdrawal Agent Commission System (DWAC) or another established clearing corporation performing similar functions. If we fail to deliver certificates evidencing the Warrant Shares by the Warrant Share Delivery Date, we are required to pay to the holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such certificates are delivered or the holder rescinds such exercise.

Notice of Corporate Action

We will provide notice to holders of the warrants to provide them with the opportunity to exercise their warrants and hold common stock in order to participate in or vote on the following corporate events:

- if we shall take a record of the holders of our common stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any shares of stock of any class or any other right;
- any capital reorganization of our company, any reclassification or recapitalization of our capital stock or any consolidation or merger with, or any sale, transfer or other disposition of all or substantially all of our property, assets or business to, another corporation; or
- a voluntary or involuntary dissolution, liquidation or winding up of our company.

Limitations on Exercise

The number of Warrant shares that may be acquired by any holder upon any exercise of the Warrant shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 4.9% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), or beneficial ownership limitation. The holder may elect to change this beneficial ownership limitation from 4.9% to 9.9% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon 61 days' prior written notice.

Additional Provisions

The above summary of certain terms and provisions of the Warrants is qualified in its entirety by reference to the detailed provisions of the Warrants, the form of which will be filed as an exhibit to a current report on Form 8-K that is incorporated herein by reference. We are not required to issue fractional shares upon the exercise of the Warrants. No holders of the Warrants will possess any rights as a stockholder under those Warrants until the holder exercises those Warrants. The Warrants may be transferred independent of the common stock they were issued with, on a form of assignment, subject to all applicable laws.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement. These documents may include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as Proxy Statements.

This prospectus supplement incorporates by reference the documents listed below that we previously have filed with the SEC and any additional documents that we may file with the SEC (File No. 0-24469) under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

- our Annual Report on Form 10-K for the year ended December 31, 2008;
- our definitive proxy statement on Schedule 14A, filed with the SEC on April 20, 2009;
- our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2009;
- our Current Reports on Form 8-K filed with the SEC on February 23, 2009 (as amended by a Current Report on Form 8-K/A filed March 2, 2009), February 27, 2009, April 15, 2009 and May 5, 2009;
- all documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before the termination of the offering; and
- the description of our common stock contained in our Registration Statement on Form 8-A filed under the Exchange Act on May 23, 2008, including any amendment or report filed for the purpose of updating such description.

We are not, however, incorporating by reference any documents, or portions of documents, that are not deemed “filed” with the SEC.

You can obtain a copy of any or all of the documents incorporated by reference in this prospectus (other than an exhibit to a document unless that exhibit is specifically incorporated by reference into that document) from the SEC on its web site at <http://www.sec.gov>. You also can obtain these documents from us without charge by visiting our internet web site <http://www.rexahn.com> or by requesting them in writing, by email or by telephone at the following address:

Tae Heum (Ted) Jeong
Senior Vice President & Chief Financial Officer
Rexahn Pharmaceuticals, Inc.
9620 Medical Center Drive
Rockville, Maryland 20850
(240) 268-5300

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act, and file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any reports, proxy statements and other information we file at the SEC’s public reference room at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. You may also access filed documents at the SEC’s web site at <http://www.sec.gov>.

We are incorporating by reference some information about us that we file with the SEC. We are disclosing important information to you by referencing those filed documents. Any information that we reference this way is considered part of this prospectus. The information in this prospectus supplement supersedes statements made in the accompanying prospectus and information incorporated by reference that we have filed with the SEC prior to the date of this prospectus supplement, while information that we file with the SEC after the date of this prospectus supplement that is incorporated by reference will automatically update and supersede this information.

LEGAL MATTERS

The validity of the securities offered hereby has been passed upon for us by Chadbourne & Parke LLP, Washington, DC. Feldman Weinstein & Smith LLP, New York, New York, will pass upon certain legal matters for the placement agent.



**UP TO \$60,000,000 OF OUR
COMMON STOCK
PREFERRED STOCK
WARRANTS
DEBT SECURITIES**

We may offer from time to time up to \$60,000,000 in total of:

- shares of our common stock (including the associated preferred stock purchase rights);
- shares of our preferred stock;
- warrants to purchase shares of common stock or preferred stock;
- debt securities; or
- any combination of our common stock, preferred stock, warrants or debt securities.

We may offer the common stock, preferred stock, warrants and debt securities separately or together, in separate series, in amounts, at prices and on terms to be set forth in one or more supplements to this prospectus. The preferred stock, warrants and debt securities we may offer may be convertible into or exercisable or exchangeable for common or preferred stock or debt or other securities of ours or equity securities or debt of one or more other entities. When we decide to issue securities, we will provide you with the specific terms and the public offering price of the securities in prospectus supplements. In the case of debt securities, these terms will include, as applicable, the specific designation, aggregate principal amount, maturity, rate or formula of interest, premium, subordination terms, terms of convertibility and terms for redemption. In the case of shares of preferred stock, these terms will include, as applicable, the specific title and stated value, and any dividend, liquidation, redemption, conversion, voting and other rights. You should read this prospectus and the prospectus supplements carefully before you invest. This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement.

Our common stock is listed on the American Stock Exchange and traded under the symbol "RNN." None of the other securities are currently publicly traded. We may sell these securities to or through underwriters and also to other purchasers or through agents. We will set forth the names of any underwriters or agents in the accompanying prospectus supplement.

Our principal executive offices are located at 9620 Medical Center Drive, Rockville, Maryland 20850 and our telephone number is (240) 268-5300.

You should read carefully this prospectus, the documents incorporated by reference in this prospectus and any prospectus supplement before you invest. Please see "Risk Factors" on page __ for more information.

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

The date of this prospectus is August 8, 2008

TABLE OF CONTENTS

	<u>Page</u>
Summary	1
Risk Factors	3
Special Note Regarding Forward Looking Statements	3
About this Prospectus	3
Use of Proceeds	4
Plan of Distribution	4
Description of Debt Securities	6
Description of Common Stock	12
Description of Preferred Stock	14
Description of Warrants	15
Incorporation of Certain Documents by Reference	17
Where You Can Find More Information	18
Legal Matters	18
Experts	18

SUMMARY

This summary provides a brief overview of the key aspects of this offering. Because it is only a summary, it does not contain all of the detailed information contained elsewhere in this prospectus or in the documents included as exhibits to the registration statement that contains this prospectus. Accordingly, you are urged to carefully review this prospectus in its entirety.

Except as otherwise indicated by the context, references in this prospectus to “Rexahn,” “we,” “us” or “our,” are references to Rexahn Pharmaceuticals, Inc. The terms “Rexahn,” “we,” “us” or “our” in each case do not include the selling stockholders. References to the “Securities Act” are references to the Securities Act of 1933, as amended, and references to the “Exchange Act” are references to the Securities Exchange Act of 1934, as amended.

Company Background

Our company resulted from a merger of Corporate Road Show.Com Inc., originally a New York corporation (“CPRD”), and Rexahn, Corp, a Maryland corporation, immediately after giving effect to a 1-for-100 reverse stock split and the reincorporation of CPRD as a Delaware corporation under the name Rexahn Pharmaceuticals, Inc.” (“Rexahn Pharmaceuticals”), with Rexahn, Corp surviving as a wholly owned operating subsidiary of ours (the “Merger”). The Merger was effective as of May 13, 2005. On September 29, 2005, Rexahn, Corp, was merged with and into us and Rexahn, Corp’s separate existence was terminated.

Rexahn, Corp was founded in March 2001 and began as a biopharmaceutical company focusing on oncology drugs. Dr. Chang H. Ahn, our Chairman, a former reviewer for the Food and Drug Administration (the “FDA”) and research scientist for the National Cancer Institute, helped guide our initial research efforts toward signal inhibitor therapies. Our mission is to discover, develop and market innovative therapeutics that address unmet medical needs.

Our Business Generally

We are a clinical stage biopharmaceutical company dedicated to the discovery, development, and commercialization of innovative treatments for cancer, central nervous system disorders, sexual dysfunction and other unmet medical needs. We intend to leverage our drug-discovery technologies, scientific expertise and developmental know-how to develop and commercialize targeted cancer drugs with greater clinical benefits for patients and new drugs for the treatment of diseases of the central nervous system and sexual dysfunction. We will continue to identify internally developed compounds as potential drug candidates, as well as assess compounds developed by others and, if necessary, license the rights to these compounds in order to develop and commercialize them as drugs.

We currently have a number of drug candidates in clinical development. Our lead anti-cancer drug candidate, Archexin™, which we previously referred to as RX-0201, completed Phase I clinical trials in 2006 and is currently in Phase II clinical trials for patients with renal cell carcinoma. Archexin™ received “orphan drug” designation from the U.S. Food and Drug Administration, or FDA, for five cancer indications (renal cell carcinoma, glioblastoma, ovarian cancer, stomach cancer and pancreatic cancer). The FDA orphan drug program is intended to stimulate research, development and approval of products that treat rare diseases. With orphan drug designation, sponsor companies benefit from an expedited FDA review or approval process, seven years of marketing exclusivity after approval and tax incentives for clinical research.

We are currently developing Serdaxin™ for treatment of depression, and Zoraxel™ for treatment of sexual dysfunction. Zoraxel™ is in Phase II clinical trials in male erectile dysfunction and is a dual enhancer of serotonin and dopamine, which are key brain neurotransmitters important for sexual function such as sexual arousal, erection and ejaculation. Phase II clinical trials for Serdaxin™ are also planned in 2008.

To date, we have not received approval for the sale of any drug candidates in any market and, therefore, have not generated any revenues from our drug candidates.

Securities We are Offering

We may offer any of the following securities from time to time:

- shares of our common stock (including the associated preferred stock purchase rights);
- shares of our preferred stock;
- warrants to purchase shares of common stock or preferred stock;
- debt securities; or
- any combination of our common stock, preferred stock, warrants or debt securities.

When we use the term “securities” in this prospectus, we mean any of the securities we may offer with this prospectus, unless we say otherwise. The total dollar amount of all securities that we may issue will not exceed \$60,000,000. This prospectus, including the following summary, describes the general terms that may apply to the securities; the specific terms of any particular securities that we may offer will be described in a separate supplement to this prospectus.

Common Stock. We may offer shares of our common stock. Our common stock currently is listed on the American Stock Exchange under the symbol “RNN.”

Preferred Stock. We may offer our preferred stock in one or more series. For any particular series we offer, the applicable prospectus supplement will describe the specific designation; the aggregate number of shares offered; the rate and periods, or manner of calculating the rate and periods, for dividends, if any; the stated value and liquidation preference amount, if any; the voting rights, if any; the terms on which the series will be convertible into or exchangeable for other securities or property, if any; the redemption terms, if any; and any other specific terms.

Warrants. We may offer warrants to purchase our common stock and preferred stock. For any particular warrants we offer, the applicable prospectus supplement will describe the underlying security; expiration date; the exercise price or the manner of determining the exercise price; the amount and kind, or the manner of determining the amount and kind, of any security to be delivered by us upon exercise; and any other specific terms. We may issue the warrants under warrant agreements between us and one or more warrant agents.

Debt Securities. Our debt securities may be senior or subordinated in right of payment and may be convertible into our debt securities, preferred stock, common stock or other securities or property. For any particular debt securities we offer, the applicable prospectus supplement will describe the specific designation, the aggregate principal or face amount and the purchase price; the ranking, whether senior or subordinated; the stated maturity; the redemption terms, if any; the conversion terms, if any; the rate or manner of calculating the rate and the payment dates for interest, if any; the amount or manner of calculating the amount payable at maturity and whether that amount may be paid by delivering cash, securities or other property; and any other specific terms. We will issue the senior and subordinated debt securities under separate indentures between us and a trustee we will identify in an applicable prospectus supplement.

Listing. If any securities are to be listed or quoted on a securities exchange or quotation system, the applicable prospectus supplement will say so.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the specific risks set forth under the caption “Risk Factors” in the applicable prospectus supplement before making an investment decision. The risks and uncertainties described in the prospectus supplement are not the only ones we face. Additional risks and uncertainties that we are unaware of or that we believe are not material at the time could also materially adversely affect our business, financial condition or results of operations. In any case, the value of our common stock, preferred stock or warrants could decline, and you could lose all or part of your investment. You should also refer to the other information contained in this prospectus or incorporated herein by reference, including our consolidated financial statements and the notes to those statements and the risks and uncertainties described in Item 1 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2007. See also the information contained under the heading “Special Note Regarding Forward-Looking Statements” immediately below.

SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement contains and incorporates by reference certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements also may be included in other statements that we make. All statements that are not descriptions of historical facts are forward-looking statements, based on management’s estimates, assumptions and projections that are subject to risks and uncertainties. These statements can generally be identified by the use of forward-looking terminology such as “believes,” “expects,” “intends,” “may,” “will,” “should,” or “anticipates” or similar terminology. Although we believe that the expectations reflected in our forward-looking statements are reasonable as of the date made, actual results could differ materially from those currently anticipated due to a number of factors, including risks relating to the early stage of products under development; uncertainties relating to clinical trials; dependence on third parties; future capital needs; and risks relating to the commercialization, if any, of our product candidates (such as marketing, safety, regulatory, patent, product liability, supply, competition and other risks). Additional important factors that could cause actual results to differ materially from our current expectations are identified in other filings with the Securities and Exchange Commission (the “SEC”). Our forward-looking statements are based on information available to us today, and we will not update these statements, except as may be required by law.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC using a “shelf” registration process. Under this shelf process, we may from time to time offer up to \$60,000,000 in total of (a) shares of common stock, \$0.0001 par value per share (including the preferred stock purchase rights attached thereto), (b) shares of preferred stock, \$0.0001 par value per share, in one or more series, (c) warrants to purchase shares of common stock or preferred stock, (d) debt securities or (e) any combination of our common stock, preferred stock, warrants or debt securities, either individually or as units consisting of one or more of the foregoing, each at prices and on terms to be determined at the time of sale. The common stock, preferred stock, warrants and debt securities are collectively referred to in this prospectus as “securities.” The securities offered pursuant to this prospectus may be one or more series of issuances and the total offering price of the securities will not exceed \$60,000,000 (or its equivalent (based on the applicable exchange rate at the time of the sale) in one or more foreign currencies, currency units or composite currencies as shall be designated by us).

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with the additional information described below under the heading “Where You Can Find More Information.”

The registration statement that contains this prospectus, including the exhibits to the registration statement and the information incorporated by reference, contains additional information about the securities offered under this prospectus. That registration statement can be read at the SEC web site or at the SEC offices mentioned below under the heading “Where You Can Find More Information.”

You should rely only on the information provided in this prospectus and in any prospectus supplement, including the information incorporated by reference. We have not authorized anyone to provide you with different information. You should not assume that the information in this prospectus or any supplement to this prospectus is accurate at any date other than the date indicated on the cover of these documents.

USE OF PROCEEDS

We will use the net proceeds received from the sale of the securities for development of current and future product candidates, clinical trials, working capital and general corporate purposes or as specified in a prospectus supplement.

PLAN OF DISTRIBUTION

We may sell the securities being offered by this prospectus separately or together:

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

In addition, we may issue the securities being offered by this prospectus as a dividend or distribution.

We may effect the distribution of the securities from time to time in one or more transactions at a fixed price or prices, which may be changed from time to time:

- at market prices prevailing at the times of sale;
- at prices related to prevailing market prices; or
- at negotiated prices.

We will describe the method of distribution of the securities in the prospectus supplement.

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

If we use an underwriter or underwriters in the sale of securities, we will execute an underwriting agreement with the underwriter or underwriters at the time we reach an agreement for sale. We will set forth in the prospectus supplement the names of the specific managing underwriter or underwriters, as well as any other underwriters, and the terms of the transactions, including compensation of the underwriters and dealers. This compensation may be in the form of discounts, concessions or commissions. Underwriters and others participating in any offering of the securities may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. We will describe any of these activities in the prospectus supplement.

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

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

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

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

- that the institution's purchase of the securities at the time of delivery of the securities is not prohibited under the law of any jurisdiction to which the institution is subject; and
- that we shall have sold to the underwriters the total principal amount of the offered securities, less the principal amount covered by the delayed contracts.

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

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

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

DESCRIPTION OF DEBT SECURITIES

We may offer any combination of senior debt securities or subordinated debt securities. We may issue the senior debt securities and the subordinated debt securities under separate indentures between us, as issuer, and the trustee or trustees identified in a prospectus supplement. Further information regarding the trustee may be provided in the prospectus supplement. The form for each type of indenture is filed as an exhibit to the registration statement of which this prospectus is a part.

The prospectus supplement will describe the particular terms of any debt securities we may offer and may supplement the terms summarized below. The following summaries of the debt securities and the indentures are not complete. We urge you to read the indentures filed as exhibits to the registration statement that includes this prospectus and the description of the additional terms of the debt securities included in the prospectus supplement.

General

Within the total dollar amount of this shelf registration statement, we may issue an unlimited principal amount of debt securities in separate series. We may specify a maximum aggregate principal amount for the debt securities of any series. The debt securities will have terms that are consistent with the indentures. Senior debt securities will be unsecured and unsubordinated obligations and will rank equal with all our other unsecured and unsubordinated debt. Subordinated debt securities will be paid only if all payments due under our senior indebtedness, including any outstanding senior debt securities, have been made.

The indentures might not limit the amount of other debt that we may incur or whether that debt is senior to the debt securities offered by this prospectus, and might not contain financial or similar restrictive covenants. The indentures might not contain any provision to protect holders of debt securities against a sudden or dramatic decline in our ability to pay our debt.

The prospectus supplement will describe the debt securities and the price or prices at which we will offer the debt securities. The description will include:

- the title and form of the debt securities;
- any limit on the aggregate principal amount of the debt securities or the series of which they are a part;
- the person to whom any interest on a debt security of the series will be paid;
- the date or dates on which we must repay the principal;
- the rate or rates at which the debt securities will bear interest;
- if any, the date or dates from which interest will accrue, and the dates on which we must pay interest;

- the place or places where we must pay the principal and any premium or interest on the debt securities;
- the terms and conditions on which we may redeem any debt security, if at all;
- any obligation to redeem or purchase any debt securities, and the terms and conditions on which we must do so;
- the denominations in which we may issue the debt securities;
- the manner in which we will determine the amount of principal of or any premium or interest on the debt securities;
- the currency in which we will pay the principal of and any premium or interest on the debt securities;
- the principal amount of the debt securities that we will pay upon declaration of acceleration of their maturity;
- the amount that will be deemed to be the principal amount for any purpose, including the principal amount that will be due and payable upon any maturity or that will be deemed to be outstanding as of any date;
- if applicable, that the debt securities are defeasible and the terms of such defeasance;
- if applicable, the terms of any right to convert debt securities into, or exchange debt securities for, shares of our debt securities, preferred stock or common stock or other securities or property;
- whether we will issue the debt securities in the form of one or more global securities and, if so, the respective depositaries for the global securities and the terms of the global securities;
- the subordination provisions that will apply to any subordinated debt securities;
- any addition to or change in the events of default applicable to the debt securities and any change in the right of the trustee or the holders to declare the principal amount of any of the debt securities due and payable;
- any addition to or change in the covenants in the indentures; and
- any other terms of the debt securities not inconsistent with the applicable indentures.

We may sell the debt securities at a substantial discount below their stated principal amount. We will describe U.S. federal income tax considerations, if any, applicable to debt securities sold at an original issue discount in the prospectus supplement. An “original issue discount security” is any debt security sold for less than its face value, and which provides that the holder cannot receive the full face value if maturity is accelerated. The prospectus supplement relating to any original issue discount securities will describe the particular provisions relating to acceleration of the maturity upon the occurrence of an event of default. In addition, we will describe U.S. federal income tax or other considerations applicable to any debt securities that are denominated in a currency or unit other than U.S. dollars in the prospectus supplement.

Conversion and Exchange Rights

The prospectus supplement will describe, if applicable, the terms on which you may convert debt securities into or exchange them for debt securities, preferred stock and common stock or other securities or property. The conversion or exchange may be mandatory or may be at your option. The prospectus supplement will describe how the amount of debt securities, number of shares of preferred stock and common stock or other securities or property to be received upon conversion or exchange would be calculated.

Subordination of Subordinated Debt Securities

The indebtedness underlying any subordinated debt securities will be payable only if all payments due under our senior indebtedness, as defined in the applicable indenture and any indenture supplement, including any outstanding senior debt securities, have been made. If we distribute our assets to creditors upon any dissolution, winding-up, liquidation or reorganization or in bankruptcy, insolvency, receivership or similar proceedings, we must first pay all amounts due or to become due on all senior indebtedness before we pay the principal of, or any premium or interest on, the subordinated debt securities. In the event the subordinated debt securities are accelerated because of an event of default, we may not make any payment on the subordinated debt securities until we have paid all senior indebtedness or the acceleration is rescinded. If the payment of subordinated debt securities accelerates because of an event of default, we must promptly notify holders of senior indebtedness of the acceleration.

If we experience a bankruptcy, dissolution or reorganization, holders of senior indebtedness may receive more, ratably, and holders of subordinated debt securities may receive less, ratably, than our other creditors. The indenture for subordinated debt securities may not limit our ability to incur additional senior indebtedness.

Form, Exchange and Transfer

We will issue debt securities only in fully registered form, without coupons, and only in denominations of \$1,000 and integral multiples thereof, unless the prospectus supplement provides otherwise. The holder of a debt security may elect, subject to the terms of the indentures and the limitations applicable to global securities, to exchange them for other debt securities of the same series of any authorized denomination and of similar terms and aggregate principal amount.

Holders of debt securities may present them for exchange as provided above or for registration of transfer, duly endorsed or with the form of transfer duly executed, at the office of the transfer agent we designate for that purpose. We will not impose a service charge for any registration of transfer or exchange of debt securities, but we may require a payment sufficient to cover any tax or other governmental charge payable in connection with the transfer or exchange. We will name the transfer agent in the prospectus supplement. We may designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, but we must maintain a transfer agent in each place where we will make payment on debt securities.

If we redeem the debt securities, we will not be required to issue, register the transfer of or exchange any debt security during a specified period prior to mailing a notice of redemption. We are not required to register the transfer of or exchange of any debt security selected for redemption, except the unredeemed portion of the debt security being redeemed.

Global Securities

The debt securities may be represented, in whole or in part, by one or more global securities that will have an aggregate principal amount equal to that of all debt securities of that series. Each global security will be registered in the name of a depositary identified in the prospectus supplement. We will deposit the global security with the depositary or a custodian, and the global security will bear a legend regarding the restrictions on exchanges and registration of transfer.

No global security may be exchanged in whole or in part for debt securities registered, and no transfer of a global security in whole or in part may be registered, in the name of any person other than the depositary or any nominee or successor of the depositary unless:

- the depositary is unwilling or unable to continue as depositary; or
- the depositary is no longer in good standing under the Exchange Act or other applicable statute or regulation.

The depositary will determine how all securities issued in exchange for a global security will be registered.

As long as the depositary or its nominee is the registered holder of a global security, we will consider the depositary or the nominee to be the sole owner and holder of the global security and the underlying debt securities. Except as stated above, owners of beneficial interests in a global security will not be entitled to have the global security or any debt security registered in their names, will not receive physical delivery of certificated debt securities and will not be considered to be the owners or holders of the global security or underlying debt securities. We will make all payments of principal, premium and interest on a global security to the depositary or its nominee. The laws of some jurisdictions require that some purchasers of securities take physical delivery of such securities in definitive form. These laws may prevent you from transferring your beneficial interests in a global security.

Only institutions that have accounts with the depositary or its nominee and persons that hold beneficial interests through the depositary or its nominee may own beneficial interests in a global security. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants. Ownership of beneficial interests in a global security will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by the depositary or any such participant.

The policies and procedures of the depositary may govern payments, transfers, exchanges and other matters relating to beneficial interests in a global security. We and the trustee will assume no responsibility or liability for any aspect of the depositary's or any participant's records relating to, or for payments made on account of, beneficial interests in a global security.

Payment and Paying Agents

We will pay principal and any premium or interest on a debt security to the person in whose name the debt security is registered at the close of business on the regular record date for such interest.

We will pay principal and any premium or interest on the debt securities at the office of our designated paying agent. Unless the prospectus supplement indicates otherwise, the corporate trust office of the trustee will be the paying agent for the debt securities.

Any other paying agents we designate for the debt securities of a particular series will be named in the prospectus supplement. We may designate additional paying agents, rescind the designation of any paying agent or approve a change in the office through which any paying agent acts, but we must maintain a paying agent in each place of payment for the debt securities.

The paying agent will return to us all money we pay to it for the payment of the principal, premium or interest on any debt security that remains unclaimed for a specified period. Thereafter, the holder may look only to us for payment, as an unsecured general creditor.

Consolidation, Merger and Sale of Assets

Under the terms of the indentures, so long as any securities remain outstanding, we may not consolidate or enter into a share exchange with or merge into any other person, in a transaction in which we are not the surviving corporation, or sell, convey, transfer or lease our properties and assets substantially as an entirety to any person, unless:

- the successor assumes our obligations under the debt securities and the indentures; and
- we meet the other conditions described in the indentures.

Events of Default

Each of the following will constitute an event of default under each indenture:

- failure to pay any interest on any debt security when due, for more than a specified number of days past the due date;
- failure to deposit any sinking fund payment when due;
- failure to perform any covenant or agreement in the indenture that continues for a specified number of days after written notice has been given by the trustee or the holders of a specified percentage in aggregate principal amount of the debt securities of that series;
- events of bankruptcy, insolvency or reorganization; and
- any other event of default specified in the prospectus supplement.

If an event of default occurs and continues, both the trustee and holders of a specified percentage in aggregate principal amount of the outstanding securities of that series may declare the principal amount of the debt securities of that series to be immediately due and payable. The holders of a majority in aggregate principal amount of the outstanding securities of that series may rescind and annul the acceleration if all events of default, other than the nonpayment of accelerated principal, have been cured or waived.

Except for its duties in case of an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request or direction of any of the holders, unless the holders have offered the trustee reasonable indemnity. If they provide this indemnification and subject to conditions specified in the applicable indenture, the holders of a majority in aggregate principal amount of the outstanding securities of any series may direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series.

No holder of a debt security of any series may institute any proceeding with respect to the indentures, or for the appointment of a receiver or a trustee, or for any other remedy, unless:

- the holder has previously given the trustee written notice of a continuing event of default;
- the holders of a specified percentage in aggregate principal amount of the outstanding securities of that series have made a written request upon the trustee, and have offered reasonable indemnity to the trustee, to institute the proceeding;
- the trustee has failed to institute the proceeding for a specified period of time after its receipt of the notification; and

- the trustee has not received a direction inconsistent with the request within a specified number of days from the holders of a specified percentage in aggregate principal amount of the outstanding securities of that series.

Modification and Waiver

We and the trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; and
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of notes may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the trustee may only make the following changes with the consent of the holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of notes;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon the redemption, of any debt securities; or
- reducing the percentage of debt securities the holders of which are required to consent to any amendment.

The holders of a majority in principal amount of the outstanding debt securities of any series may waive any past default under the indenture with respect to debt securities of that series, except a default in the payment of principal, premium or interest on any debt security of that series or in respect of a covenant or provision of the indenture that cannot be amended without each holder's consent.

Except in limited circumstances, we may set any day as a record date for the purpose of determining the holders of outstanding debt securities of any series entitled to give or take any direction, notice, consent, waiver or other action under the indentures. In limited circumstances, the trustee may set a record date. To be effective, the action must be taken by holders of the requisite principal amount of such debt securities within a specified period following the record date.

Defeasance

To the extent stated in the prospectus supplement, we may elect to apply the provisions in the indentures relating to defeasance and discharge of indebtedness, or to defeasance of restrictive covenants, to the debt securities of any series. The indentures provide that, upon satisfaction of the requirements described below, we may terminate all of our obligations under the debt securities of any series and the applicable indenture, known as legal defeasance, other than our obligation:

- to maintain a registrar and paying agents and hold monies for payment in trust;
- to register the transfer or exchange of the notes; and
- to replace mutilated, destroyed, lost or stolen notes.

In addition, we may terminate our obligation to comply with any restrictive covenants under the debt securities of any series or the applicable indenture, known as covenant defeasance.

We may exercise our legal defeasance option even if we have previously exercised our covenant defeasance option. If we exercise either defeasance option, payment of the notes may not be accelerated because of the occurrence of events of default.

To exercise either defeasance option as to debt securities of any series, we must irrevocably deposit in trust with the trustee money and/or obligations backed by the full faith and credit of the United States that will provide money in an amount sufficient in the written opinion of a nationally recognized firm of independent public accountants to pay the principal of, premium, if any, and each installment of interest on the debt securities. We may only establish this trust if, among other things:

- no event of default shall have occurred or be continuing;
- in the case of legal defeasance, we have delivered to the trustee an opinion of counsel to the effect that we have received from, or there has been published by, the Internal Revenue Service a ruling or there has been a change in law, which in the opinion of our counsel, provides that holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred;
- in the case of covenant defeasance, we have delivered to the trustee an opinion of counsel to the effect that the holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred; and
- we satisfy other customary conditions precedent described in the applicable indenture.

Notices

We will mail notices to holders of debt securities as indicated in the prospectus supplement.

Title

We may treat the person in whose name a debt security is registered as the absolute owner, whether or not such debt security may be overdue, for the purpose of making payment and for all other purposes.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York.

DESCRIPTION OF COMMON STOCK

The following description of our common stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the common stock that we may offer under this prospectus. For the complete terms of our common stock, please refer to our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws that are filed as exhibits to our reports incorporated by reference into the registration statement that includes this prospectus. The General Corporation Law of Delaware may also affect the terms of our common stock.

Authorized and Outstanding Common Stock

Our Amended and Restated Certificate of Incorporation provides that we have authority to issue 500,000,000 shares of our common stock, par value \$0.0001 per share. As of July 22, 2008, there were 56,025,649 shares of common stock issued and outstanding, and there were outstanding warrants to purchase approximately an additional 1,207,151 shares of our common stock and options to purchase 6,195,795 shares of our common stock.

Listing

Our common stock is listed on the American Stock Exchange under the symbol “RNN”.

Dividends

Our Board of Directors may authorize, and we may make, distributions to our common stockholders, subject to any restriction in our Amended and Restated Certificate of Incorporation and to those limitations prescribed by law. However, we have never paid cash dividends on our common stock or any other securities. We anticipate that we will retain all of our future earnings, if any, for use in the expansion and operation of our business and do not anticipate paying cash dividends in the foreseeable future.

Fully Paid and Non-Assessable

All shares of our outstanding common stock are fully paid and non-assessable.

Voting Rights

Each share of our common stock is entitled to one vote in each matter submitted to a vote at a meeting of stockholders including in all elections for directors; stockholders are not entitled to cumulative voting in the election for directors. Our stockholders may vote either in person or by proxy.

Preemptive and Other Rights

During the period from December 24, 2007 to March 28, 2008, we issued 5,500,017 shares of our common stock at a sale price of \$1.40 per share, and warrants to purchase an additional 1,207,151 shares of our common stock at an exercise price of \$1.80 per share, in transactions exempt from the registration requirements of the Securities Act. If we sell shares of our common stock at a price of less than \$1.40 per share before the two-year anniversary of the related private placement, then the securities purchase agreements executed in connection with the private placement obligate us to issue additional shares to the private placement purchasers to ensure that their effective purchase price per share will equal the lowest price at which we sell shares of our common stock during the applicable two-year period. Likewise, if we sell shares of our common stock at a price less than \$1.80 per share before the two-year anniversary of the related private placement, then pursuant to the warrants issued in the private placement the exercise price under such warrants will be adjusted to equal the lowest price at which we sell shares of our common stock during the applicable two-year period.

Except as described in the preceding paragraph, holders of our common stock have no preemptive rights and have no other rights to subscribe for additional securities of our company under Delaware law. Our common stockholders do not have any conversion rights or rights of redemption (or, if any such rights have been granted in relation to the common stock, any such rights have been waived). Upon liquidation, all holders of our common stock are entitled to participate pro rata in our assets available for distribution, subject to the rights of any class of preferred stock then outstanding.

Stockholder Action by Written Consent; Meetings

Pursuant to our Amended and Restated Certificate of Incorporation, stockholders may take action by written consent in lieu of voting at a meeting.

Our Amended and Restated Bylaws provide that we must hold an annual meeting of stockholders. Special meetings of our stockholders may be called at any time only by the Board of Directors or by the Chairman of the Board.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Olde Monmouth Stock Transfer Company Incorporated.

Limitations of Director Liability

Delaware law authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breach of directors' fiduciary duty of care. Although Delaware law does not change directors' duty of care, it enables corporations to limit available relief to equitable remedies such as injunction or rescission. Our Amended and Restated Bylaws in effect limit the liability of our directors to us and our stockholders to the full extent permitted by Delaware law. Specifically, directors are not personally liable for monetary damages to us or our stockholders for breach of the director's fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

Indemnification

Our Amended and Restated Bylaws provides for mandatory indemnification of directors and officers against any expense, liability or loss to which they may become subject, or which they may incur as a result of being or having been a director or officer, in effect to the maximum extent permitted by law. Our Amended and Restated Bylaws in addition require us to advance or reimburse directors and officers for expenses they incur in connection with indemnifiable claims. We also maintain directors' and officers' liability insurance.

DESCRIPTION OF PREFERRED STOCK

The following description of our preferred stock, together with the additional information we include in any prospectus supplements, summarizes the material terms and provisions of the preferred stock that we may offer under this prospectus. For the complete terms of our preferred stock, please refer to our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws that are filed as exhibits to our reports incorporated by reference into the registration statement that includes this prospectus. The General Corporation Law of Delaware may also affect the terms of our common stock.

Preferred Stock That We May Offer and Sell to You

Our Amended and Restated Certificate of Incorporation authorizes our Board of Directors, without further stockholder action, to provide for the issuance of up to 100,000,000 shares of preferred stock, in one or more classes or series and to fix the rights, preferences, privileges, and restrictions thereof, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series of the designation of such series, without further vote or action by the stockholders. We may amend from time to time our restated Certificate to increase the number of authorized shares of preferred stock. Any such amendment would require the approval of the holders of a majority of the voting power of all of the shares of capital stock entitled to vote for directors, without a vote of the holders of preferred stock or any series thereof unless any such holder is entitled to vote for directors or a vote of any such holder is otherwise required pursuant to the restated certificate or certificates of designations establishing a series of preferred stock. As of the date of this prospectus, no shares of preferred stock are outstanding.

The particular terms of any series of preferred stock being offered by us under this shelf registration statement will be described in the prospectus supplement relating to that series of preferred stock.

Those terms may include:

- the title and liquidation preference per share of the preferred stock and the number of shares offered;
- the purchase price of the preferred stock;
- the dividend rate (or method of calculation), the dates on which dividends will be paid and the date from which dividends will begin to accumulate;
- any redemption or sinking fund provisions of the preferred stock;
- any conversion provisions of the preferred stock;
- the voting rights, if any, of the preferred stock; and
- any additional dividend, liquidation, redemption, sinking fund and other rights, preferences, privileges, limitations and restrictions of the preferred stock.

The preferred stock will, when issued, be fully paid and non-assessable.

The description of preferred stock above and the description of the terms of a particular series of preferred stock in the prospectus supplement are not complete. You should refer to the applicable certificate of designations for complete information. The prospectus supplement will also contain a description of U.S. federal income tax consequences relating to the preferred stock, if material.

Voting Rights

The General Corporation Law of Delaware provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designations.

Other

Our issuance of preferred stock may have the effect of delaying or preventing a change in control. Our issuance of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of common stock or other preferred stock or could adversely affect the rights and powers, including voting rights, of the holders of common stock or other preferred stock. The issuance of preferred stock could have the effect of decreasing the market price of our common stock.

Transfer Agent and Registrar

The transfer agent and registrar for the preferred stock will be set forth in the applicable prospectus supplement.

DESCRIPTION OF WARRANTS

General

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement.

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

The applicable prospectus supplement will describe the terms of the warrants in respect of which this prospectus is being delivered, including, where applicable, the following:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the designation, terms and number of shares of common stock or preferred stock purchasable upon exercise of such warrants;
- the designation and terms of the shares of common stock or preferred stock with which such warrants are issued and the number of such warrants issued with such shares;
- the date on and after which such warrants and the related common stock or preferred stock will be separately transferable, including any limitations on ownership and transfer of such warrants;
- the price at which each share of common stock or preferred stock purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- the minimum or maximum amount of such warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- a discussion of certain federal income tax consequences; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

This summary of the warrants is not complete. We urge you to read the warrants filed as exhibits to the registration statement that includes this prospectus and the description of the additional terms of the warrants included in the prospectus supplement.

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

Exercise of Warrants

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

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

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

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

This prospectus incorporates by reference the documents listed below that we previously have filed with the SEC and any additional documents that we may file with the SEC (File No. 000-50590) under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

- Our Annual Report on Form 10-KSB for the year ended December 31, 2007;
- Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2008;
- Our Current Reports on Form 8-K filed with the SEC on January 3, March 6, March 26, April 1 and July 16, 2008;
- All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before the termination of the offering; and
- The description of our common stock contained in our Registration Statement on Form 8-A filed under the Exchange Act on May 23, 2008, including any amendment or report filed for the purpose of updating such description.

We are not, however, incorporating by reference any documents, or portions of documents, that are not deemed “filed” with the SEC.

You can obtain a copy of any or all of the documents incorporated by reference in this prospectus (other than an exhibit to a document unless that exhibit is specifically incorporated by reference into that document) from the SEC on its web site at <http://www.sec.gov>. You also can obtain these documents from us without charge by visiting our internet web site <http://www.rexahn.com> or by requesting them in writing, by email or by telephone at the following address:

Tae Heum (Ted) Jeong
Senior Vice President & Chief Financial Officer
Rexahn Pharmaceuticals, Inc.
9620 Medical Center Drive
Rockville, Maryland 20850
(240) 268-5300

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act that registers the distribution of the securities offered under this prospectus. The registration statement, including the attached exhibits and schedules and the information incorporated by reference, contains additional relevant information about the securities and us. The rules and regulations of the SEC allow us to omit from this prospectus certain information included in the registration statement.

In addition, we file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy this information and the registration statement at the SEC public reference room located at 450 Fifth Street, N.W., Washington D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room.

In addition, the SEC maintains an internet web site that contains reports, proxy statements and other information about issuers of securities, like us, who file such material electronically with the SEC. The address of that web site is <http://www.sec.gov>. We also maintain a web site at <http://www.rexahn.com>, which provides additional information about our company. The contents of our website, however, are not a part of this prospectus.

LEGAL MATTERS

Chadbourne & Parke LLP, Washington, DC, will provide us an opinion as to certain legal matters in connection with the securities offered hereby.

EXPERTS

The financial statements of Rexahn Pharmaceuticals, Inc. appearing in the Annual Report (Form 10-KSB) as of December 31, 2007 and 2006 and for the years ended December 31, 2007, 2006 and the cumulative period from inception (March 19, 2001) to December 31, 2007 have been audited by Lazar Levine & Felix LLP, an independent registered public accounting firm, as set forth in their reports thereon included therein, and incorporated herein by reference. Such financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.