rexahn PHARMACEUTICALS

8,333,333 shares of common stock
Warrants to Purchase 3,333,333 shares of common stock

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering 8,333,333 shares of our common stock, par value $0.0001 per share, and common stock purchase warrants, or warrants, to purchase up to 3,333,333 shares of our common stock. The common stock and warrants will be sold in units, with each unit consisting of one share of common stock and a warrant to purchase 0.40 shares of common stock at an exercise price of $1.50 per share of common stock. Each unit will be sold to investors in this offering at a negotiated price of $1.20 per unit. The shares of common stock and warrants will be issued separately but can only be purchased together in this offering.

Our common stock is listed on the NYSE Amex under the symbol "RNN". We have applied to list the shares being sold in this offering on the NYSE Amex. There can be no assurances that the NYSE Amex will grant the application. On March 25, 2011, the last reported sale price of our common stock on the NYSE Amex was $1.41 per share.

The warrants are not and will not be listed on any national securities exchange.

Investing in our securities involves a high degree of risk. Please read "Risk Factors" beginning on page S-5 of this prospectus supplement, page 3 of the accompanying prospectus and the risk factors described in the documents incorporated by reference into this prospectus supplement.

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.

We have retained Rodman & Renshaw, LLC to act as our exclusive placement agent in connection with the units offered by this prospectus supplement. The placement agent has agreed to use its reasonable best efforts to sell the securities offered by this prospectus supplement. We have agreed to pay the placement agent the placement agent fees set forth in the table below, which assumes that we sell all of the units we are offering. In addition to the placement agent's fees below, we have agreed to issue the placement agent warrants to purchase up to an aggregate of 208,333 shares of our common stock at an exercise price of $1.50 per share.

	Per Unit	Total
Public offering price of units	$ 1.200	$ 9,999,999
Placement agent fees(1)	$ 0.066	$ 549,999
Proceeds, before expenses, to us(2)	$ 1.134	$ 9,449,999

(1) In addition, we have agreed to issue the placement agent warrants to purchase up to 208,333 shares of our common stock at an exercise price of $1.50 per share and to reimburse the placement agent for certain of its expenses as described under "Plan of Distribution" on page S-19 of this prospectus supplement.

(2) The proceeds shown exclude proceeds that we may receive upon exercise of the warrants.

Delivery of the shares and warrants will take place on or about March 31, 2011, subject to the satisfaction of certain conditions.

Rodman & Renshaw, LLC

The date of this prospectus supplement is March 28, 2011

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

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a "shelf" registration statement on Form S-3 (File No. 333-152640) that we filed with the Securities and Exchange Commission on July 30, 2008 and was declared effective on August 8, 2008.

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 do 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.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement and the accompanying prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of Rexahn and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference in this prospectus supplement and the accompanying prospectus, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information referred to under the heading "Risk Factors" in this prospectus supplement beginning on page S-5.

Our Company

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 seven 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.

We currently have three clinical stage drug candidates: Archexin®, Serdaxin®, and Zoraxel™.

Archexin®

Archexin is a 20 nucleotide single stranded DNA anti-sense molecule, which we believe is a best-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, or FDA, for five cancer indications (renal cell carcinoma, or RCC, glioblastoma, ovarian cancer, stomach cancer and pancreatic cancer). The FDA orphan drug program provides seven years of marketing exclusivity after approval and tax incentives for clinical research. In October 2006, we announced the conclusion of the Phase I clinical trial of Archexin, our leading drug candidate. The Phase I clinical trial of Archexin, which took place at Georgetown University and the University of Alabama, was an open-label, dose-escalation study with 14 day continuous infusion in 17 patients with solid tumors. The Phase I trial was intended primarily to assess the safety and tolerability of Archexin in patients with advanced cancer. The trial results showed that the dose limiting toxicity of Archexin occurring at 315 mg/m^2 dose in the form of fatigue. No other serious adverse events such as hematological toxicities were observed in this Phase I study. In the Phase I study stable disease was observed in two out of the 17 Patients. Archexin is currently being studied in a Phase II clinical trial for the treatment of pancreatic cancer with several patients enrolled and enrollment continuing in 2011. The Archexin Phase IIa trial is a single-arm, open-label study with 35 subjects conducted at global sites in the United States and India. Archexin will be administered in combination with gemcitabine in patients with advanced pancreatic cancer to assess safety and preliminary efficacy, maximum tolerated dose, and overall survival. Archexin's Phase II clinical trial protocol for the treatment of RCC was accepted by the FDA, but issues with enrollment have delayed the trial. The enrollment issues were primarily due to the small number of patients that have been diagnosed with RCC and the fact that such patients are often treated with surgery instead of drug therapies. After further consideration of the trial design and the limited number of patients, there was a reallocation of resources and Rexahn reprioritized Archexin to pursue studies in pancreatic cancer. We own one issued U.S. patent for Archexin.

In October 2006, we announced the conclusion of the Phase I clinical trial of Archexin. We currently estimate that the Phase IIa trials for pancreatic cancer patients will be completed in the first half of 2012 and will require approximately $500,000.

***Serdaxin*® (RX-10100)**

Serdaxin is an extended release formulation of clavulanic acid, which is an ingredient present in antibiotics approved by the FDA. We are currently developing Serdaxin for the treatment of depression and neurodegenerative disorders. We have recently concluded a Phase IIa proof of concept clinical trial for major depressive disorder ("MDD"), with Serdaxin. The proof-of-concept, randomized, double blind, placebo controlled and dose ranging (5 mg, 10 mg, 15 mg administered twice daily) Phase IIa clinical trial enrolled 77 MDD patients at multiple sites in the United States. No statistical difference was seen between the three doses and the placebo on the Montgomery-Asberg Depression Rating Scale ("MADRS"). A high dropout rate of non-responders in the placebo group contributed to a higher-than-expected response for the placebo-treated subjects that completed the study. We believe this high dropout rate may have contributed to the absence of statistical significance. In our ad hoc analysis, results from the Phase IIa clinical trial showed that patients suffering from MDD responded most positively to the 5 mg dose of the drug, and supported proceeding to a Phase IIb clinical trial. In the subgroup analysis, the study showed that patients with severe MDD taking 5 mg of Serdaxin had significant improvement in MADRS, scores after 8 weeks of treatment, compared to the placebo group. Among the 77 patients, 53 patients were classified as having severe MDD. Of the 14 patients treated with 5 mg of Serdaxin, MADRS scores improved by 55.6%, compared to only 34.0% in the placebo group (n = 14), which was statistically significant (p=0.041) on an intent to treat basis. In addition, 64.3% of patients with severe MDD treated with the 5 mg of Serdaxin were considered "Responders" compared to 28.6% in the placebo group (p=0.0581). A "Responder" is a patient with a change from baseline MADRS score of greater than or equal to 50% after treatment. Additionally, 42.9% of patients in the treatment group at 5 mg of Serdaxin were in remission with a MADRS score of less than or equal to 12 after eight weeks of treatment, versus 14.3% in the placebo group (p=0.209). During the trial there were no reports of side effects that are commonly linked to currently marketed antidepressant drugs, such as selective serotonin uptake inhibitors, ("SSRI"), serotonin-norepinephrine reuptake inhibitors, ("SNRI"), and tricyclic antidepressants ("TCA"). The 5 mg Serdaxin-treated group (20 adverse events) reported 40% fewer adverse events than the placebo group (36 adverse events). In addition, the 5 mg Serdaxin-treated group reported a lower dropout rate by week 2 of 4.8% compared to 9.1% in the placebo group, and by week 8 the drop-out rate for the Serdaxin group was only 14.3% compared to 59.1% in the placebo group. Pre-clinical studies suggest that Serdaxin may have an inverted, U-shape dose-response curve. This inverted, dose-response relationship may explain the observation in the Phase IIa trial of a more positive response in patients taking the lowest dose. Due to this phenomenon, higher doses of Serdaxin may not be effective, suggesting an additional potential benefit with respect to the risk of overdose problems prevalent in other psychogenic medications. A Phase IIb trial for MDD with lower doses started recruiting patients in early 2011. We are also currently planning the Phase II clinical trial for Parkinson's disease("PD"), with Serdaxin and have submitted the protocol for this study to the FDA.

We currently estimate that the Phase IIb MDD studies will require $7,100,000 through the end of 2012. Phase II clinical trials for the use of Serdaxin for PD are being developed. We currently estimate PD studies will require $900,000 through the end of 2012.

In March 2005, we licensed-in CNS related intellectual property from Revaax Pharmaceuticals, LLC and agreed to use commercially reasonable efforts to develop and commercialize one or more licensed products. The intellectual property rights acquired cover use of certain compounds for anxiety, depression, aggression, cognition, Attention Deficit Hyperactivity Disorder and neuroprotection. We have an exclusive license rights to four issued U.S. patents owned by Revaax Pharmaceuticals, Inc. relating to these uses.

***Zoraxel*™ (RX-10100)**

We are developing Zoraxel for treatment of erectile dysfunction. Zoraxel is an immediate release formulation of clavulanic acid, the same active ingredient found in our product candidate Serdaxin. The Phase IIa proof of concept clinical trial of Zoraxel is complete with positive results and the Phase IIb trial will commence in 2011. Rexahn's decision to move forward with the Phase IIb trial is supported by data from the Phase IIa proof of concept, randomized, double blind, placebo controlled and dose ranging (5 mg, 10 mg, 15 mg) study of 39 erectile dysfunction patients (ages of 18 to 65) treated with Zoraxel. The Phase IIa study was completed in May 2009 and demonstrated that Zoraxel consistently improved International Index of Erectile Function, ("IIEF"), scores of treated subjects. The Phase IIa study results showed treatment with 15mg of Zoraxel at week 8 improving subjects' IIEF-EF scores by 6.5, a value obtained from the changes from the baseline between scores of 15 mg of Zoraxel (5.3) and the placebo group (-1.2). Furthermore, the study showed among treated subjects a dose dependent treatment effect with improved erectile function and quality of life measures. The study also showed Zoraxel to be well tolerated in the patients in the study with no serious adverse events reported. To examine the clinical relevance of Zoraxel as an erectile dysfunction drug, an "effect size" analysis has been conducted. Effect size ("ES") is a data analysis index developed by Dr. Jacob Cohen of New York University and is derived from the improvement in IIEF mean score for the treatment group minus the improvement in IIEF mean score of the placebo group over the treatment period, divided by the standard deviation of the entire sample at baseline. An ES value greater than 0.80 is deemed "a considerable change" under the ES criteria. The ES for IIEF-EF and IIEF-intercourse satisfaction indices of Zoraxel (2.59 and 0.88, respectively) were larger than 0.80, suggesting a considerable change in sexual experiences in Zoraxel-treated patients based on the ES criteria. The Phase IIb study is designed to assess Zoraxel's efficacy in approximately 225 male subjects, ages 18 to 65, with ED. The double blind, randomized, placebo-controlled, 12-week study will include IIEF, Sexual Encounter Profile, or SEP, 2 (Penetration) & 3 (Sexual Intercourse) survey, as primary endpoints with 25 and 50 mg doses. The Phase IIb study is expected to begin in the second half of 2011 and the preliminary data is expected to be available in 2012, subject to the absence of any objection of the FDA to the Phase IIb trial we developed for Zoraxel. The study will be conducted at multiple sites in the United States.

We currently estimate that these Phase IIb studies will require approximately $3,000,000 through the end of 2012.

In March 2005, we licensed-in CNS-related intellectual property from Revaax Pharmaceuticals, LLC and agreed to use commercial reasonable efforts to develop and commercialize one or more licensed products. The intellectual property rights acquired cover use of certain compounds in persons with sexual dysfunction. We have an exclusive license rights to one issued U.S. patent owned by Revaax Pharmaceuticals, Inc. relating to this use.

Risk Factors

Our business is subject to substantial risk. Please carefully consider the "Risk Factors" section and other information in this prospectus supplement and the accompanying prospectus for a discussion of risks. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus supplement and the accompanying prospectus. Additional risks and uncertainties not presently known to us or that we deem currently immaterial may also impair our business operations. You should be able to bear a complete loss of your investment.

Corporate Information

Our principal executive offices are located at 15245 Shady Grove Road, Suite 455, Rockville, Maryland 20850 and our telephone number is (240) 268-5300. Our website address is www.rexahn.com. **Information contained on our website is not a part of this prospectus supplement or the accompanying prospectus.**

The Offering

Common stock we are offering	8,333,333 shares.
Common stock to be outstanding after this offering	95,237,656 (as more fully described in the notes following this table).
Warrants we are offering	We are offering warrants to purchase 3,333,333 shares of common stock. Each warrant has an exercise price of $1.50 per share and is exercisable immediately for a period of five years. This prospectus supplement also relates to the offering of the shares of common stock issuable upon exercise of the warrants. There is currently no market for the warrants and none is expected to develop after this offering.
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-15.
NYSE Amex symbol	RNN

The number of shares of common stock shown above to be outstanding after this offering is based on 86,904,323 shares outstanding as of March 28, 2011 and excludes:

- 8,042,795 shares of our common stock subject to outstanding options having a weighted average exercise price of $1.01 per share;
- 8,385,000 shares of our common stock reserved for future issuance pursuant to our existing stock option plan;
- 5,134,476 shares of our common stock that have been reserved for issuance upon exercise of outstanding warrants having a weighted average exercise price of $1.55 per share;
- 8,333,333 shares of our common stock issuable upon the exercise of warrants offered hereby; and
- 208,333 shares of our common stock issuable upon the exercise of the warrant being issued to the placement agent in connection with this offering.

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 2011, we expect to spend approximately $8.6 million on clinical development for Phase II clinical trials of Archexin, Serdaxin and Zoraxel™, $5.8 million on the development of preclinical compounds, $4.1 million on general corporate expenses and approximately $200,000 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.

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, 2010 and 2009 was $45,739,663 and $31,717,556, respectively. For the years ended December 31, 2010 and 2009, we had net losses of $14,022,107 and $2,903,098, respectively, partially 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, and we cannot guarantee how long it will take the FDA to review applications for 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 guarantee that any of our drug candidates will ultimately be approved by the FDA, if the will ultimately be reviewed on an expedited or priority basis by the FDA, or if an expedited or priority review will significantly shorten actual FDA review time. 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 antisense oligonucleotide ("ASO") compounds. To date, although applications have been made by other companies, the FDA has not approved any NDAs for any ASO compounds for cancer treatment. 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.

There is no assurance as to the precise scope of our marketing exclusivity afforded under the Orphan Drug Act

Even if we have orphan drug designation for a particular drug indication, we cannot guarantee that another company also holding orphan drug designation will not receive FDA approval for the same indication before we do. If that were to happen, our applications for that indication may not be approved until the competing company's seven-year period of exclusivity expired. Even if we are the first to obtain FDA approval for an orphan drug indication, there are certain circumstances under which a competing product may be approved for the same indication during our seven-year period of marketing exclusivity, such as if the later product is shown to be clinically superior to the orphan product. Further, the seven-year marketing exclusivity would not prevent other sponsors from obtaining approval of the same compound for other indications or the use of other types of drugs for the same use as the orphan drug.

Our drug candidates are in various stages of clinical trials.

Our drug candidates are in various stages of development and require extensive clinical testing, which are very expensive, time-consuming and difficult to design. Archexin, our oncology drug candidate, is currently in Phase IIa trials for pancreatic cancer. In 2010, we initiated a Phase IIb clinical trial of Serdaxin for depression, with results expected in early 2012. We completed our Phase IIa clinical trial for Zoraxel, a sexual dysfunction drug candidate, and will initiate a Phase IIb clinical trial in the second half of 2011.

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;
- change in the standard of care of the indication being studied;
- 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.

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 Investigational New Drug ("IND") applications or the conduct of these trials.

Additionally, we may have difficulty enrolling patients in our clinical trials. If we experience such difficulties, we may not be able to complete the clinical trial or we may experience significant delays in completing the clinical trial.

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. In addition, standard of care treatments may change which would require additional studies to be done.

Two of our clinical stage product candidates, Serdaxin and Zoraxel, are based on the same active ingredient, and if safety concerns arise with the active ingredient, then it may delay or prevent further development, regulatory approval or successful commercialization of both product candidates.

Two of our clinical stage product candidates, Serdaxin and Zoraxel, are based upon the same active ingredient. If safety concerns arise or any other material adverse events occur involving the active ingredient, it may result in delays, prevent the further development or adversely impact our ability to obtain necessary FDA and other regulatory approvals and to successfully commercialize both of these product candidates. Any such delay or inability to further develop and commercialize one or both of Serdaxin and Zoraxel would harm our business and our prospects.

Serdaxin and Zoraxel may be subject to early generic competition or early off-label use of the active ingredient shared by both clinical stage product candidates.

Two of our clinical stage product candidates, Serdaxin and Zoraxel, are based upon the same active ingredient that has previously been approved by the FDA for use in combination with antibiotics. Because we do not have a patent that claims this active ingredient chemical structure and because we are not likely to be able to obtain new chemical entity market exclusivity for this active ingredient, we may be rapidly subject to early generic competition or early off-label use of the active ingredient, which may adversely impact our ability to successfully commercialize one or both of Serdaxin or Zoraxel and may harm our financial condition, results of operations and business.

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 or 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. 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 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 of formulation patents.

- A third party manufacturer may gain knowledge from working with us that could be used to supply one of our competitors with a product that competes with ours.

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 develop global 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 our 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, Pfizer and Glaxo-SmithKline currently sell both generic and proprietary compounds for the treatment of cancer, depression and erectile dysfunction. 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 an active patent protection program that includes filing patent applications on new compounds to treat cancer and other conditions, formulations, delivery systems, and methods of making and using products, and prosecuting these patent applications in the United States and abroad. As patents issue, we also file continuation applications for some of them. Through these actions, we are building a patent portfolio of patents assigned to and licensed to the company. Further, Rexahn is developing proprietary research and platforms to strengthen and expand our innovative pipelines. 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 in the United States or any other country;
- whether or not others will obtain patents claiming aspects similar to those covered by our licensed patents and patent applications;
- whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose;
- whether our patents will be challenged by competitors alleging that a patent is invalid or unenforceable and, if opposed or litigated, the outcome of any court action as to patent validity, enforceability or scope;
- whether a competitor will develop a similar compound that is outside the scope of protection afforded by a patent or whether the patent scope is inherent in the claims or modified due to interpretation of claim scope by a court;
- whether there were activities previously undertaken by a licensor that could limit the scope, validity or enforceability of licensed patents and intellectual property;
- whether there will be challenges or litigation brought by a licensor alleging breach of a license agreement and its effect on our ability to practice particular technologies and the outcome of any such challenge or litigation; or
- whether a competitor will assert infringement of its patents or intellectual property, whether or not meritorious, and what the outcome of any related litigation or challenge may be.

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 to successfully 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, Chief Executive Officer, Chief Science Officer and regulatory expert, could result in delays in product development and diversion of management resources, which could adversely affect our operating results. Dr. Ahn plans to step down as Chief Executive Officer, but will remain with the Company as our Chief Science Officer. 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. We have determined that there was a material weakness over financial reporting as of December 31, 2009, however, we implemented remedial measures and believe that our internal controls are effective as of December 31, 2010.

Risks Related to Our Stock

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;
- changes in our relationships with licensors or other strategic partners;
- 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 pharmaceutical or biotechnology industries.

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 700,000 shares) during a three-month period. Non-affiliates may sell restricted securities after six months without any limits on volume.

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, 2010 and 2009 was $45,739,663 and $31,717,556, respectively. For the years ended December 31, 2010 and 2009, we had net losses of $14,022,107 and $2,903,098, respectively, partially 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.

Trading volume in our common stock is limited and its price is volatile.

Our common stock is traded on the NYSE Amex under the trading symbol "RNN." Currently there is an existing but limited public trading market for our common stock. Our common stock has experienced, and is likely to experience in the future, significant price and volume fluctuation. Among the factors that could cause the market price of our common stock to fluctuate significantly are the following:

- the announcement of new products or product enhancements by us or our competitors;
- changes in our relationships with our licensors and other strategic partners
- 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 may require additional capital funding the receipt of which may impair the value of our common stock.

If we expand more rapidly than currently anticipated or if our working capital needs exceed our current expectations, we may need to raise additional capital through public or private equity offerings or debt financings. Our future capital requirements depend on many factors including our research, development, sales and marketing activities. We do not know whether additional financing will be available when needed, or will be available on terms favorable to us. If we cannot raise needed funds on acceptable terms, we may not be able to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures or unanticipated requirements. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution and the new equity securities may have greater rights, preferences or privileges than our existing common stock.

We have not paid dividends to our stockholders in the past, and we do not anticipate paying dividends to our stockholders in the foreseeable future.

We have not declared or paid cash dividends on our common stock. We currently intend to retain all future earnings, if any, to fund the operation of our business, and therefore we do not anticipate paying dividends on our common stock in the foreseeable future.

The sale of a significant number of shares of our common stock could cause the market price of our stock to decline.

Some or all of the "restricted" shares of our common stock issued in the merger of Corporate Road Show.Com Inc. and Rexahn, Corp, or in subsequent private placements, or that is 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 one 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 is currently listed on the NYSE AMEX under the trading symbol, "RNN". 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 transactions in penny stock are suitable 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 periodic 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

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business and cause the price of our common stock to decline.

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

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the public offering price of $1.20 per unit, if you purchase units in this offering, you will suffer immediate and substantial dilution of $1.02 per share in the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

You may experience future dilution as a result of future equity offering and exercise of outstanding options and warrants.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering. As of March 28, 2011, 8,385,000 shares of common stock were reserved for future issuance under our stock option plan. As of that date, there were also options outstanding to purchase 8,042,795 shares of our common stock and warrants outstanding to purchase 5,134,476 shares of our common stock. You will incur dilution upon exercise of any outstanding stock options or warrants.

Risks Related to The Warrants

There is no public market for the warrants to purchase common stock being offered in this offering.

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

Holders of our warrants will have no rights as a common stockholder until such holders exercise their warrants and acquire our common stock.

Until you acquire shares of our common stock upon exercise of your warrants, you will have no rights with respect to the shares of our common stock underlying such warrants. Upon exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- 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 SEC.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential" and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading "Risk Factors" beginning on page S-5 of this prospectus supplement and in our SEC filings. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the 8,333,333 units offered by this prospectus supplement, after deducting placement agent fees and expenses, will be approximately $9.32 million, assuming that we sell the maximum number of units we are offering pursuant to this prospectus supplement. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual number of units sold, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amount set forth above.

We intend to use the net proceeds of this offering for further development of our lead clinical program, including the funding of Rexahn's Phase II clinical study program of Serdaxin, Zoraxel and Archexin, 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 invest in our common stock, you will experience dilution to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value as of December 31, 2010 was approximately $10,395,457, or $0.12 per share of common stock. Net tangible book value per share is equal to our total tangible assets minus total liabilities, all divided by the number of shares of common stock outstanding as of December 31, 2010. After giving effect to the sale of 8,333,333 shares of common stock by us at a price of $1.20 per share, and after deducting our estimated placement agent fees and offering expenses payable by us, and an estimate of the fair value of the warrant liabilities, our as adjusted net tangible book value would have been approximately $17,015,457 or approximately $0.18 per share of common stock, as of December 31, 2010. This represents an immediate increase in net tangible book value of approximately $0.06 per share to existing stockholders and an immediate dilution of approximately $1.02 per share to new investors. The following table illustrates this calculation on a per share basis:

Purchase price per share			$	1.20
Net tangible book value per share as of December 31, 2010	$	0.12		
Increase per share attributable to this offering	$	0.06		
As adjusted net tangible book value per share after this offering			$	0.18
Dilution per share to new investors			$	1.02

The number of shares of common stock shown above to be outstanding after this offering is based on 84,160,849 shares outstanding as of December 31, 2010 and excludes:

- 8,076,795 shares of our common stock subject to outstanding options having a weighted average exercise price of $1.01 per share;
- 8,426,000 shares of our common stock reserved for future issuance pursuant to our existing stock option plan;
- 5,624,583 shares of our common stock that have been reserved for issuance upon exercise of outstanding warrants having a weighted average exercise price of $1.48 per share;
- 3,333,333 shares of our common stock issuable upon the exercise of warrants offered hereby; and
- 208,333 shares of our common stock issuable upon the exercise of the warrant being issued to the placement agent in connection with this offering.

Because there is no minimum offering amount required as a condition to the closing of this offering, the dilution per share to new investors may be more than that indicated above in the event that the actual number of shares sold, if any, is less than the maximum number of shares of our common stock we are offering.

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or outstanding warrants to purchase shares of our common stock. The exercise of outstanding options and warrants having an exercise price less than the offering price will increase dilution to new investors.

PRICE RANGE OF OUR COMMON STOCK

Our common stock trades on the NYSE Amex under the symbol "RNN." The following table sets forth, for the periods indicated, the reported high and low sales prices per share of our common stock on the NYSE Amex.

Period	High	Low
Year Ended December 31, 2011		
First Quarter (through March 25, 2011)	$ 1.84	$ 1.13
Year Ended December 31, 2010		
First Quarter	1.65	0.66
Second Quarter	3.65	1.12
Third Quarter	1.49	1.13
Fourth Quarter	1.24	0.98
Year Ended December 31, 2009		
First Quarter	1.06	0.45
Second Quarter	2.00	0.58
Third Quarter	1.14	0.40
Fourth Quarter	1.24	0.98

On March 25, 2011, the closing sale price for our common stock was $1.41 per share, as reported on the NYSE Amex.

DESCRIPTION OF SECURITIES

In this offering, we are offering a maximum of 8,333,333 shares of common stock and warrants to purchase up to 3,333,333 shares of common stock. This prospectus supplement also relates to the offering of shares of our common stock upon the exercise, if any, of the warrants issued in this offering.

The material terms and provisions of our common stock are described under the caption "Description of Common Stock" starting on page 12 of the accompanying prospectus.

Warrants

The material terms and provisions of the warrants to purchase 3,333,333 shares of common stock being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to and qualified in its entirety by the form of warrant, which will be provided to each investor in this offering and will be filed on a Current Report on Form 8-K in connection with this offering.

General Terms of the Warrants

The warrants to be issued in this offering represent the rights to purchase up to 3,333,333 shares of common stock at an initial exercise price of $1.50 per share. Each warrant may be exercised at any time after September 30, 2011 and from time to time on or after such exercise of date the warrants through and including the five-year anniversary of the exercise date.

Exercise

Holders of the warrants may exercise their warrants to purchase shares of our common stock on or before the expiration 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. 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 equal to the excess (if any) of the buy-in price over the product of (A) such number of warrant shares that we were required to deliver to the holder, times (B) the price at which the sell order giving rise to holder's purchase obligation was executed; and

- at the election of holder, either (A) reinstate the portion of the warrant as to such number of shares of common stock, or (B) deliver to the holder a certificate or certificates representing such number of shares of common stock.

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 exercise price of the warrants issued in this offering.

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 authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding warrants.

Fundamental Transactions

If, at any time while the warrants are outstanding, we (1) consolidate or merge with or into another corporation, (2) sell all or substantially all of our assets or (3) are subject to or complete a tender or exchange offer pursuant to which holders of our common stock are permitted to tender or exchange their shares for other securities, cash or property, (4) effect any reclassification of our common stock or any compulsory share exchange pursuant to which our common stock is converted into or exchanged for other securities, cash or property, or (5) engage in one or more transactions with another party that results in that party acquiring more than 50% of our outstanding shares of common stock (each, a "Fundamental Transaction"), 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 with an expected volatility equal to the greater of 100% and the 100-day historical price volatility obtained 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 grant, issue or sell any common stock equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of our common stock (the "Purchase Rights"), then the warrant holder will be entitled to acquire the Purchase Rights which the warrant holder could have acquired if the holder had held the number of shares of our common stock acquirable upon complete exercise of the warrant.

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 of the warrant 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.

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.

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 4.99% 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 4.99% 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.

PLAN OF DISTRIBUTION

Pursuant to an engagement letter, dated as of March 23, 2011, as amended, between us and Rodman & Renshaw, LLC, we have engaged Rodman & Renshaw, LLC as our exclusive placement agent to solicit offers to purchase the units offered by this prospectus supplement. In adition, we have engaged Brean Murray, Carret & Co., LLC as a financial advisor in connection with this transaction. Rodman & Renshaw, LLC is not purchasing any units for its own account in this offering, and is not required to arrange the purchase or sale of any additional specific number or dollar amount of the securities.

Rodman & Renshaw, LLC has agreed to use its reasonable best efforts to arrange for the sale of all of the securities in this offering. There is no requirement that any minimum number of units or dollar amount of units be sold in this offering and there can be no assurance that we will sell all or any of the units being offered. We will enter into securities purchase agreements directly with the investors who purchase securities in this offering. The engagement letter provides that the obligations of Rodman & Renshaw, LLC and the investors are subject to certain conditions precedent, including, among other things, the absence of any material adverse change in our business and the receipt of certain opinions, letters and certificates from us or our counsel.

We currently anticipate that the closing of this offering will take place no later than March 31, 2011. On the closing date, the following will occur:

- we will receive funds in the amount of the aggregate purchase price;
- Rodman & Renshaw, LLC, as placement agent, and Brean Murray, Carret & Co., LLC, as our advisor, will receive the placement agent fees and warrants in accordance with the terms of the engagement letter; and
- we will deliver the shares of common stock and warrants to the investors.

We have agreed to pay Rodman & Renshaw, LLC an aggregate fee equal to 5.5% or approximately $550,000, of the gross proceeds from the sale of the units in this offering. We have also agreed to reimburse Rodman & Renshaw, LLC for expenses incurred by it in connection with this offering. Such reimbursement will be limited to a maximum of 0.8% of the aggregate gross offering proceeds, but in no event more than $30,000 without our prior written approval. Under no circumstances will the fee, commission or discount received by Rodman & Renshaw, LLC or any other member of the Financial Institutions Regulatory Authority, or FINRA, or independent broker-dealer exceed 8% of the gross proceeds to us in this offering or any other offering in the United States pursuant to this prospectus supplement and the accompanying prospectus. Rodman & Renshaw, LLC also will receive warrants to purchase up to 208,333 shares of our common stock or 2.5% of the aggregate number of shares of common stock included in the units that are sold in the offering with an exercise price of $1.50 per share and an expiration date of August 8, 2013 (the five year anniversary of the effective date of the registration statement). We have agreed to pay Brean Murray, Carret & Co., LLC approximately $82,500 out of the Rodman & Renshaw, LLC's fee and grant to Brean Murray, Carret & Co., LLC a warrant to purchase up to 31,250 shares of our common stock out of the warrants received by Rodman & Renshaw, LLC. for its services.

The following table shows the per share and total placement agent fees we will pay in connection with the sale of the units, assuming the purchase of all of the units we are offering.

Per unit placement agent fees	$	0.066
Total	$	549,999

We estimate the total expenses of this offering which will be payable by us, excluding the placement agent fees, will be approximately $130,000. After deducting the fees due to the placement agent and our estimated offering expenses, we expect the net proceeds from this offering to be approximately $9,320,000.

We have agreed to indemnify Rodman & Renshaw, LLC and certain other persons against certain liabilities relating to or arising out of Rodman & Renshaw, LLC’s activities under the engagement letter. We have also agreed to contribute to payments Rodman & Renshaw, LLC may be required to make in respect of such liabilities.

We have agreed to indemnify Rodman & Renshaw, LLC and specified other persons against some civil liabilities, including liabilities under the Securities Act and the Exchange Act, and to contribute to payments that Rodman & Renshaw, LLC may be required to make in respect of such liabilities.

Rodman & Renshaw, LLC 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, Rodman & Renshaw, LLC 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 Rodman & Renshaw, LLC acting as principal. Under these rules and regulations, Rodman & Renshaw, LLC:

- 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.

Prior to the offering, Rodman & Renshaw, LLC and certain of its affiliates beneficially owned an aggregate of 1,350,588 shares of our common stock which are issuable upon the exercise of warrants.

A copy of the engagement letter, the form of securities purchase agreement we entered into with the purchasers and the form of warrant will be included as exhibits to our current report on Form 8-K that will be filed with the SEC in connection with the consummation of this offering.

The transfer agent for our common stock to be issued in this offering is Olde Monmouth Stock Transfer Co., Inc. We will act as transfer agent for the warrants being offered hereby.

Our common stock is traded on the NYSE Amex under the symbol “RNN.” The warrants to purchase common stock issued to the investors in this offering are not expected to be eligible for trading on any market.

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 under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of the offering covered by this prospectus supplement, except to the extent that any information contained in such filings is deemed “furnished” in accordance with SEC rules, including, but not limited to, information furnished under Items 2.02 and 7.01 of any Current Report on Form 8-K including related exhibits:

- our Form 10-K/A Amendment No. 1 to our Annual Report on form 10-K for the year ended December 31, 2010 filed with the SEC on March 23, 2011;
- our Annual Report on Form 10-K for the year ended December 31, 2010, filed with the SEC on March 16, 2011;
- our Current Report on Form 8-K filed with the SEC on March 29, 2011; 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.

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 of Finance & Chief Financial Officer
Rexahn Pharmaceuticals, Inc.
15245 Shady Grove Road, Suite 455
Rockville, Maryland 20850
(240) 268-5300
jeongth@rexahn.com

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information required by the Exchange Act 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 100 F Street, N.E., 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 common stock offered hereby has been passed upon for us by Patton Boggs LLP, Washington, D.C. Weinstein Smith LLP, New York, New York, will pass upon certain legal matters for the placement agent in connection with this offering. As of the date of this prospectus supplement, certain members of Patton Boggs LLP held 100,000 vested and 200,000 unvested options to acquire shares of our common stock.

EXPERTS

The financial statements of Rexahn Pharmaceuticals, Inc. appearing in its Annual Report on Form 10-K, as amended, for the year ended December 31, 2010 and incorporated by reference in this prospectus supplement and the accompanying prospectus, have been audited by ParenteBeard LLC, independent registered public accounting firm, as stated in their report thereon, included therein, and incorporated by reference in this prospectus supplement and the accompanying prospectus. Such financial statements have been incorporated herein and therein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

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 3 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

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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 that $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.

Table of Contents

rexahn PHARMACEUTICALS

8,333,333 SHARES OF COMMON STOCK
WARRANTS TO PURCHASE 3,333,333 SHARES OF COMMON STOCK

PROSPECTUS SUPPLEMENT

Rodman & Renshaw®

March 28, 2011